M-91-17
REV. E
AUGUST 2012

INSTALLATION MANUAL

RAILGATE
LIFT GATE SERIES

RCM-1250 C
RCM-1250 C AB
RCM-1600
RCM-1600 C AB

MAXON®
LIFT CORP.

11921 Slauson Avenue
Santa Fe Springs, CA 90607
(800) 227-4116

TABLE OF CONTENTS

Comply with the following WARNINGS and SAFETY INSTRUCTIONS while installing Liftgates. See Operation Manual for operating safety requirements.

⚠ WARNING

- Do not stand, or allow obstructions, under the platform when lowering the Liftgate. **Be sure your feet are clear of the Liftgate.**
- **Keep fingers, hands, arms, legs, and feet clear of moving Liftgate parts (and platform edges) when operating the Liftgate.**
- **Correctly stow platform when not in use. Extended platforms could create a hazard for people and vehicles passing by.**
- **Make sure vehicle battery power is disconnected** while installing Liftgate. Connect vehicle battery power to the Liftgate only when installation is complete or as required in the installation instructions.
- If it is necessary to stand on the platform while operating the Liftgate, keep your feet and any objects clear of the inboard edge of the platform. Your feet or objects on the platform can become trapped between the platform and the Liftgate extension plate.
- Never perform unauthorized modifications on the Liftgate. Modifications may result in early failure of the Liftgate and may create hazards for Liftgate operators and maintainers.
- Recommended practices for welding on steel parts are contained in the current **AWS (American Welding Society) D1.1 Structural Welding Code - Steel**. Damage to Liftgate and/or vehicle, and personal injury can result from welds that are done incorrectly.

SAFETY INSTRUCTIONS

- Read and understand the instructions in this **Installation Manual** before installing Liftgate.
- Before operating the Liftgate, read and understand the operating instructions in **Operation Manual**.
- Comply with all **WARNING** and instruction decals attached to the Liftgate.
- Keep decals clean and legible. If decals are illegible or missing, replace them. Free replacement decals are available from **Maxon Customer Service**.
- Consider the safety and location of bystanders and location of nearby objects when operating the Liftgate. Stand to one side of the platform while operating the Liftgate
- Do not allow untrained persons to operate the Liftgate.
- Wear appropriate safety equipment such as protective eyeglasses, faceshield and clothing while performing maintenance on the Liftgate and handling the battery. Debris from drilling and contact with battery acid may injure unprotected eyes and skin.
- Be careful working by an automotive type battery. Make sure the work area is well ventilated and there are no flames or sparks near the battery. Never lay objects on the battery that can short the terminals together. If battery acid gets in your eyes, immediately seek first aid. If acid gets on your skin, immediately wash it off with soap and water.
- If an emergency situation arises (vehicle or Liftgate) while operating the Liftgate, release the control switch to stop the Liftgate.
- A correctly installed Liftgate operates smoothly and reasonably quiet. The only noticeable noise during operation comes from the power unit while the platform is raised and lowered. Listen for scraping, grating and binding noises and correct the problem before continuing to operate Liftgate.

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

RCM-1250 C INSTALLATION PARTS BOX

ITEM	NOMENCLATURE OR DESCRIPTION	QTY	PART NUMBER
REF	PARTS BOX, RCM-1250C	1	251813-01
1	FRAME CLIP, 1/2" X 1-3/8"	7	050079
2	TAPPING SCREW, #10 x 1/2" LG.	4	030458
3	FUSED POWER CABLE, 175 AMP, 38' LG.	1	264422
4	JIFFY CLAMP, #130	1	125674
5	BUTT CONNECTOR, 14AWG	1	030491
6	FLAT WASHER, 3/8"	2	030556
7	BRASS ELBOW, 1/4" X 1" LG.	1	202406
8	LOOM CLAMP, #8 RUBBER	3	214663
9	ELBOW, 3/8" FEM-3/8" FEM	1	228950
10	PUMP BOX KIT (RCM)	1	251738-02
	A. PUMP BOX ASSY	1	251741
	B. PUMP BOX BRACKET	1	251817
	C. ANGLE, 2-1/2" X 2-1/2"	1	251815
	D. BOLT, 3/8"-16 X 1-1/4" LG.	2	030074
	E. HEX NUT, 3/8"-16	2	030348
	F. FLAT WASHER, 3/8"	2	030556
	G. LOCK WASHER, 3/8"	2	030555
11	ANGLE, 2-1/2" X 2-1/2"	1	251815
12	BRACKET, PUMP MOUNT	1	251816
13	INSTALLATION MANUAL	1	M-91-17
14	OPERATION MANUAL	1	M-91-19
15	MAINTENANCE MANUAL	1	M-91-18
16	INSTRUCTIONS, FUSED POWER CABLE	1	M-00-14
17	DECAL, 1250 LB CAPACITY	1	226006
18	DECAL, UP & DOWN	1	250993
19	DECAL, OPER INSTRUCTION	1	252899
20	DECAL, WARNING	1	282479-01
21	DECAL, STOW WARNING	1	282847-01
22	HEATSHRINK TUBING, 3/4" X 1-1/2" LG.	1	253316-04
23	SEALANT (FOR THREADED HYDRAULIC FITTINGS)	1	260798-02
24	BUSHING, 3/8" X 1/4" LG.	1	800183
25	HEX CAP SCREW, 3/8"-16 X 1" LG, GRADE 8	2	900014-4
26	LOCK WASHER, 3/8"	2	902011-4
27	COPPER LUG, 2GA (5/16" I.D. RING)	1	906497-02
28	PIPE NIPPLE, 3/8" X 2" LG.	1	030304

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

RCM-1600 C INSTALLATION PARTS BOX

ITEM	NOMENCLATURE OR DESCRIPTION	QTY	PART NUMBER
REF	PARTS BOX, RCM-16C	1	251814-01
1	FRAME CLIP, 1/2” X 1-3/8”	7	050079
2	TAPPING SCREW, #10 x 1/2” LG.	4	030458
3	FUSED POWER CABLE, 175 AMP, 38’ LG.	1	264422
4	JIFFY CLAMP, #130	1	125674
5	BUTT CONNECTOR, 14AWG	1	030491
6	FLAT WASHER, 3/8”	2	030556
7	BRASS ELBOW, 1/4” X 1” LG.	1	202406
8	LOOM CLAMP, #8 RUBBER	3	214663
9	ELBOW, 3/8” FEM-3/8” FEM	1	228950
10	PUMP BOX KIT (RCM)	1	251738-02
	A. PUMP BOX ASSY	1	251741
	B. PUMP BOX BRACKET	1	251817
	C. ANGLE, 2-1/2” X 2-1/2”	1	251815
	D. BOLT, 3/8”-16 X 1-1/4” LG.	2	030074
	E. HEX NUT, 3/8”-16	2	030348
	F. FLAT WASHER, 3/8”	2	030556
	G. LOCK WASHER, 3/8”	2	030555
11	ANGLE, 2-1/2” X 2-1/2”	1	251815
12	BRACKET, PUMP MOUNT	1	251816
13	INSTALLATION MANUAL	1	M-91-17
14	OPERATION MANUAL	1	M-91-19
15	MAINTENANCE MANUAL	1	M-91-18
16	INSTRUCTIONS, FUSED POWER CABLE	1	M-00-14
17	DECAL, 1600 LB CAPACITY	1	224751
18	DECAL, UP & DOWN	1	250993
19	DECAL, OPER INSTRUCTION	1	252899
20	DECAL, WARNING	1	282479-01
21	DECAL, STOW WARNING	1	282847-01
22	HEATSHRINK TUBING, 3/4” X 1-1/2” LG.	1	253316-04
23	SEALANT (FOR THREADED HYDRAULIC FITTINGS)	1	260798-02
24	BUSHING, 3/8” X 1/4” LG.	1	800183
25	HEX CAP SCREW, 3/8”-16 X 1” LG, GRADE 8	2	900014-4
26	LOCK WASHER, 3/8”	2	902011-4
27	COPPER LUG, 2GA (5/16” I.D. RING)	1	906497-02
28	COPPER LUG, 2GA (3/8” I.D. RING)	2	226778
29	PIPE NIPPLE, 3/8” X 2” LG.	1	030304

PREPARING VEHICLE BODY

⚠ WARNING

This unit cannot be used with swing type doors.
Do not remove banding from shipping pallet or attempt to move the platform, until:

1. **The unit is welded to the vehicle.**
2. **The pump installation is complete and motor wiring cable installation thru vehicle battery is complete, and pump is filled with oil and operating.**

NOTE: BODIES WITH ALUMINUM CORNER POSTS.
The Aluminum corner posts must be re-inforced before installing unit.

NOTE: FOR AB UNITS.
See page 36 for platform travel (chain) adjustment.

This unit **must** be installed as described in this **Installation Manual.** If any deviation is deemed necessary by the installer, written permission **must first be obtained from MAXON.**

Any change in the installation method **without** written permission from MAXON, **will void any warranty issued with this unit.**

Please read thru this **Installation Manual before** commencing the installation of this unit.

The methods of hoisting or supporting the unit during installation are those found in most shops. If any other method of hoisting or supporting is used, precautions **must** be taken to ensure the support is adequate and does not endanger the personnel working on the installation of this unit.

Rear lights. In many cases the rear lights will need to be relocated. Relocate your rear lights to satisfy your local codes and Federal Vehicle Safety Standard 108.

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

PREPARING VEHICLE BODY - Continued

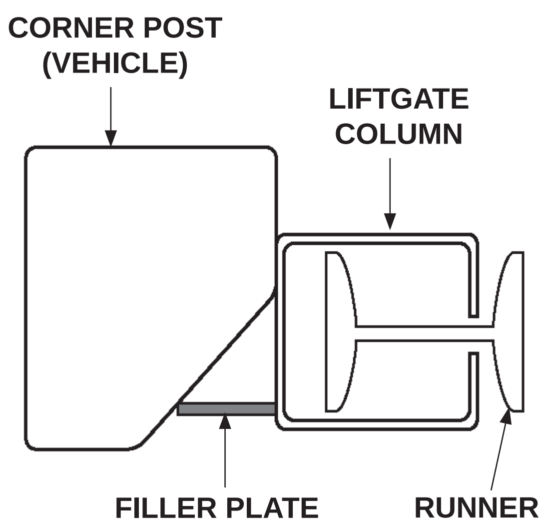
PREPARATION OF BODY INSTALLATION OF UNIT

The ideal installation, when the rear of the column assemblies are touching the body corner posts, and the rear of the main frame is touching the sill. On some body configurations this is not possible, therefore the following examples must be taken into consideration **before** hoisting the unit up to the body.

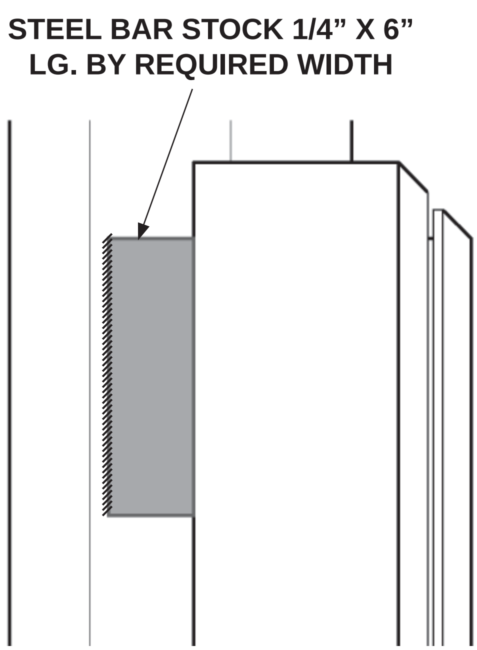
VEHICLES WITH ALUMINUM FRAMES. These bodies are covered on pages 13, 14 and 15. The steel mounting channels will need to be fabricated and installed to the corner posts **before** the unit is hoisted up to the body.

FLAT BED VEHICLES. This installation is covered on page 12.
The bracing channels for this installation cannot be cut until the unit is hoisted up to the bed.

CORNER POST CONFIGURATIONS. In the cases where the corner post is not square or rectangular, a filler will need to be fabricated **(FIG. 7-1A and 7-1B)** to fill the space between the corner post and the unit column assemblies. A typical example is illustrated below.



TOP VIEW
FIG. 7-1A

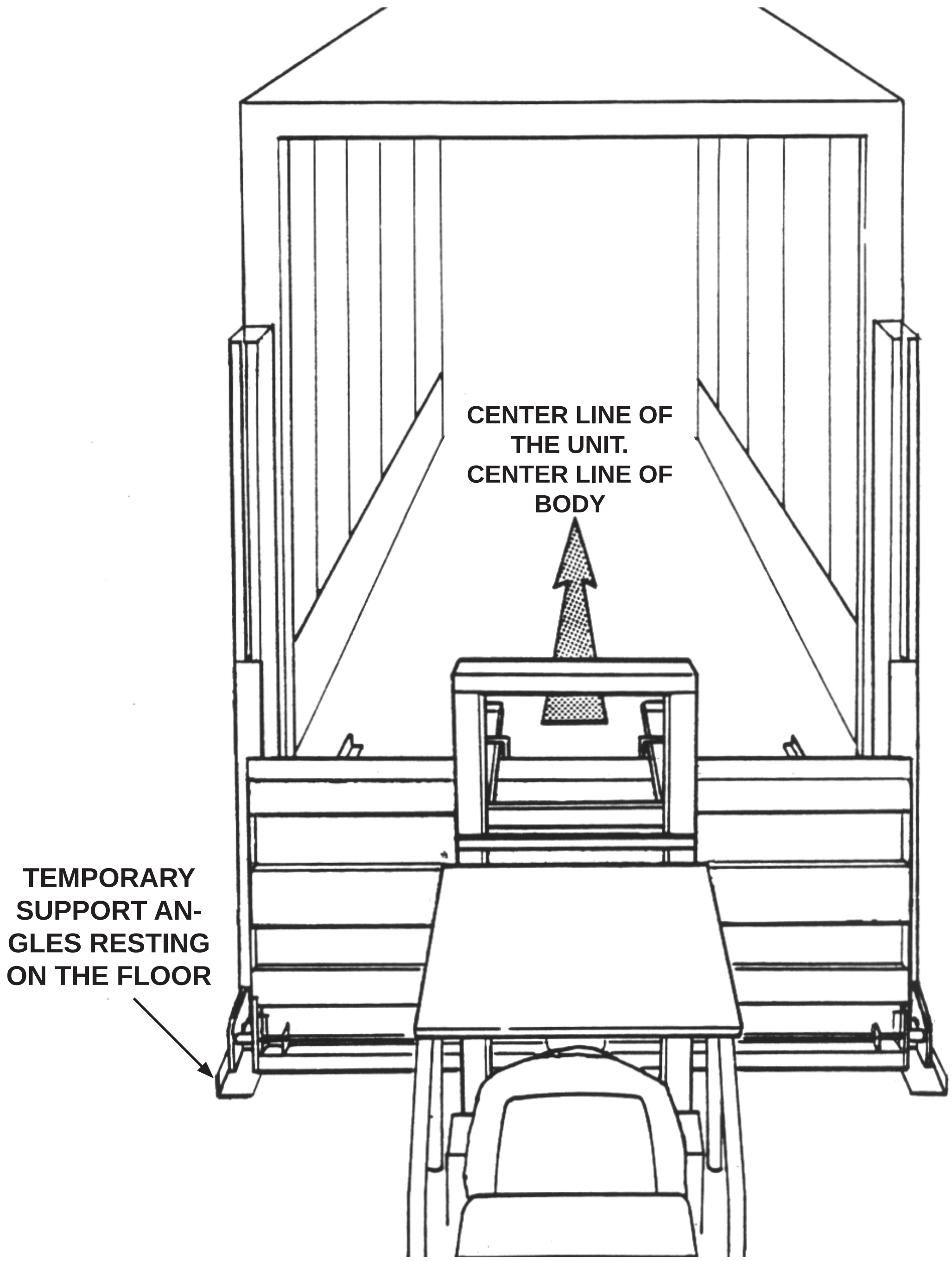


THE FILLER PLATES WILL BE WELDED IN AFTER THE UNIT IS HOISTED INTO POSITION AND TACK WELDED TO THE BODY
FIG. 7-1B

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

POSITIONING LIFTGATE

The center line of the unit must be in line with the center line of the body rear door opening (**FIG. 8-1**). The columns and main frame assembly must be touching the corner post and sill. The temporary support angles will be resting on the floor and the top surface of the main frame should be flush and level with the body floor.



CENTER LINE OF LIFTGATE MUST BE IN LINE WITH THE CENTER OF BODY REAR DOOR OPENING
FIG. 8-1

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

WELDING LIFTGATE TO VEHICLE

WELDING PROCEDURE

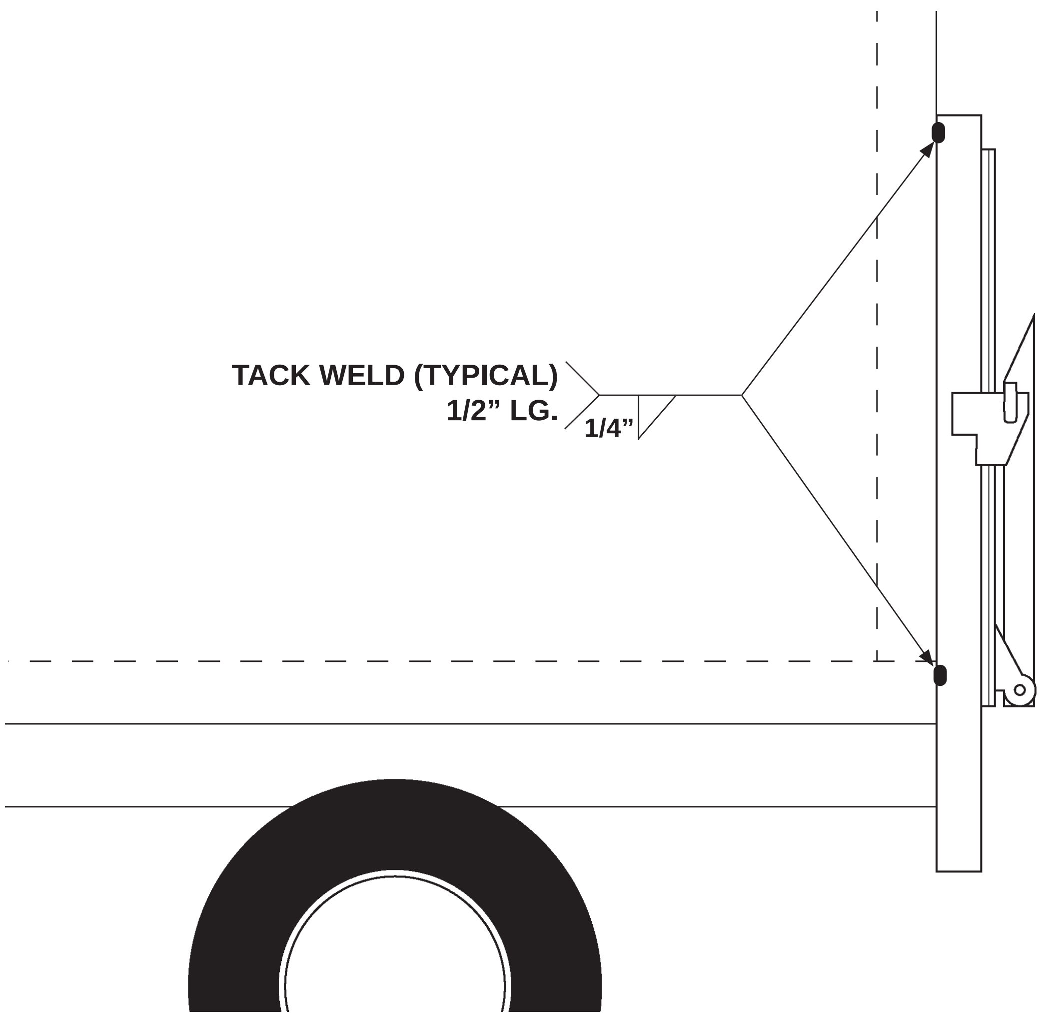
If a fork lift was used to hoist the unit and the fork lift is required for other work, the column assemblies must be tack welded to the vehicle corner posts (**FIG. 9-1**) before dis-engaging the fork lift. Tack weld on both columns as shown in **FIG. 9-1**. **See page 10.**

If an overhead chain hoist was used, it should remain hooked to the unit until the welding procedure is completed. If the hoist needs to be removed before welding, tack weld as shown in **FIG. 9-1** before removing hoist.

⚠ WARNING

When welding operations are in progress NEVER allow flame, heat or sparks to come in contact with lift chain.

NOTE: Repeat procedure for right hand column.



TACK WELD TO VEHICLE FRAME
(LEFT HAND COLUMN SHOWN)
FIG. 9-1

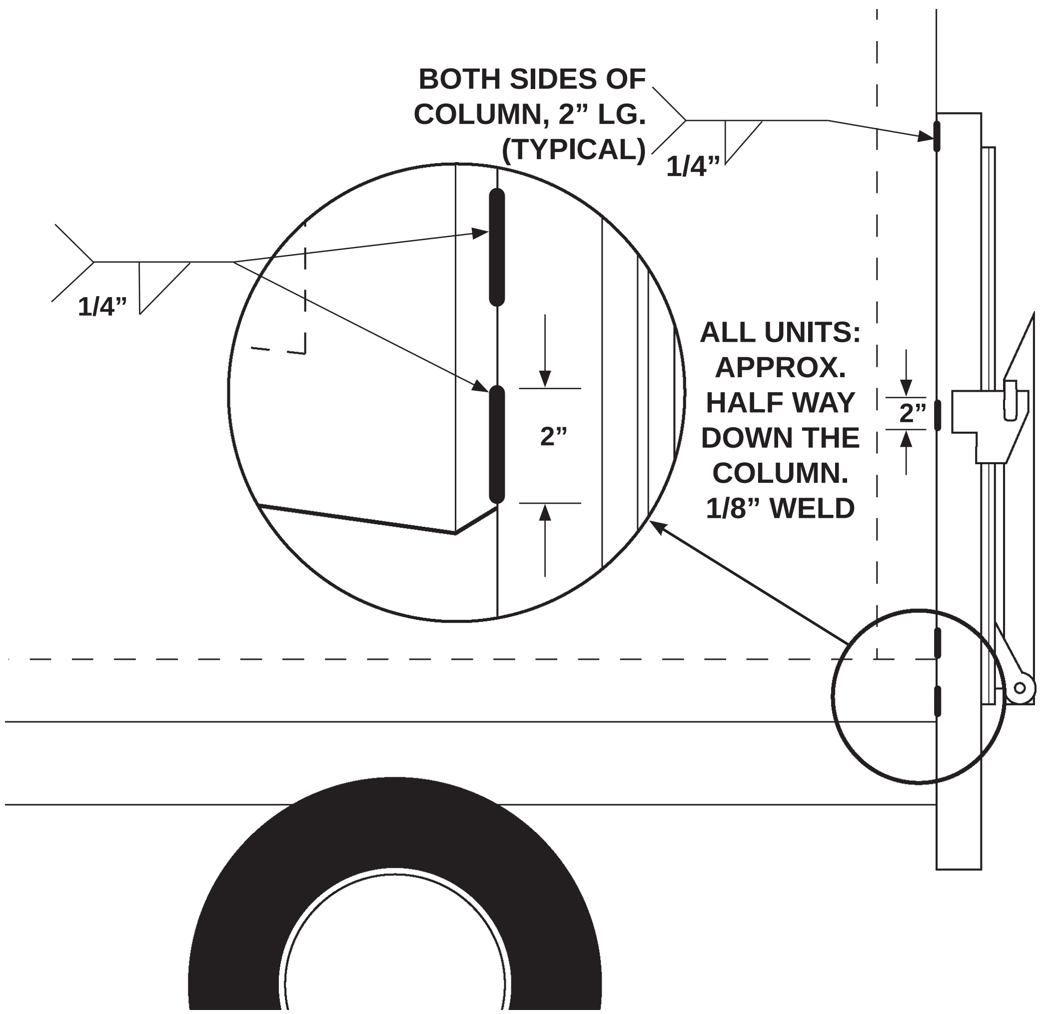
MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

WELDING LIFTGATE TO VEHICLE - Continued

WELDING PROCEDURE - STANDARD STEEL FRAME

Right hand and left hand column assemblies (**FIG. 10-1**) are welded to right and left hand corner posts. Welds shall be 1/4" fillets welds spaced as shown in **FIG. 10-1** (except where noted).

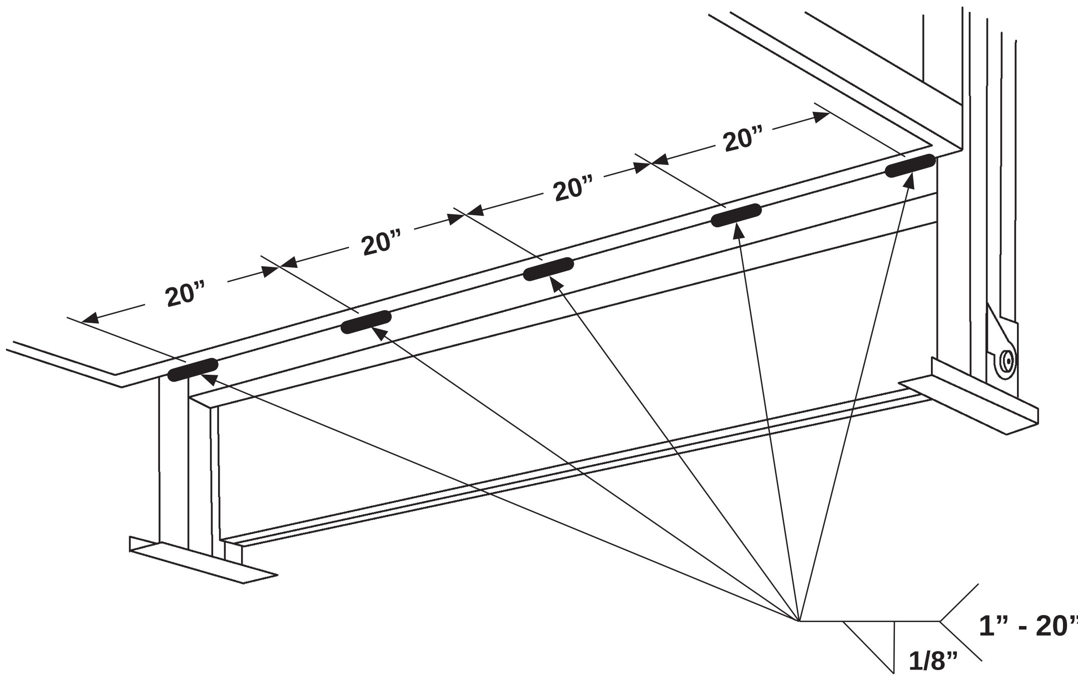
> **⚠ WARNING**
>
> **When welding operations are in progress NEVER allow flame, heat or sparks to come in contact with lift chain.**



WELD COLUMN ASSEMBLIES TO VEHICLE CORNER POSTS
(LEFT HAND SHOWN)
FIG. 10-1

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

WELDING LIFTGATE TO VEHICLE - Continued



WELD REAR OF LIFTGATE MAIN FRAME
TO VEHICLE SILL
(UNDER BODY VIEW)
FIG. 11-1

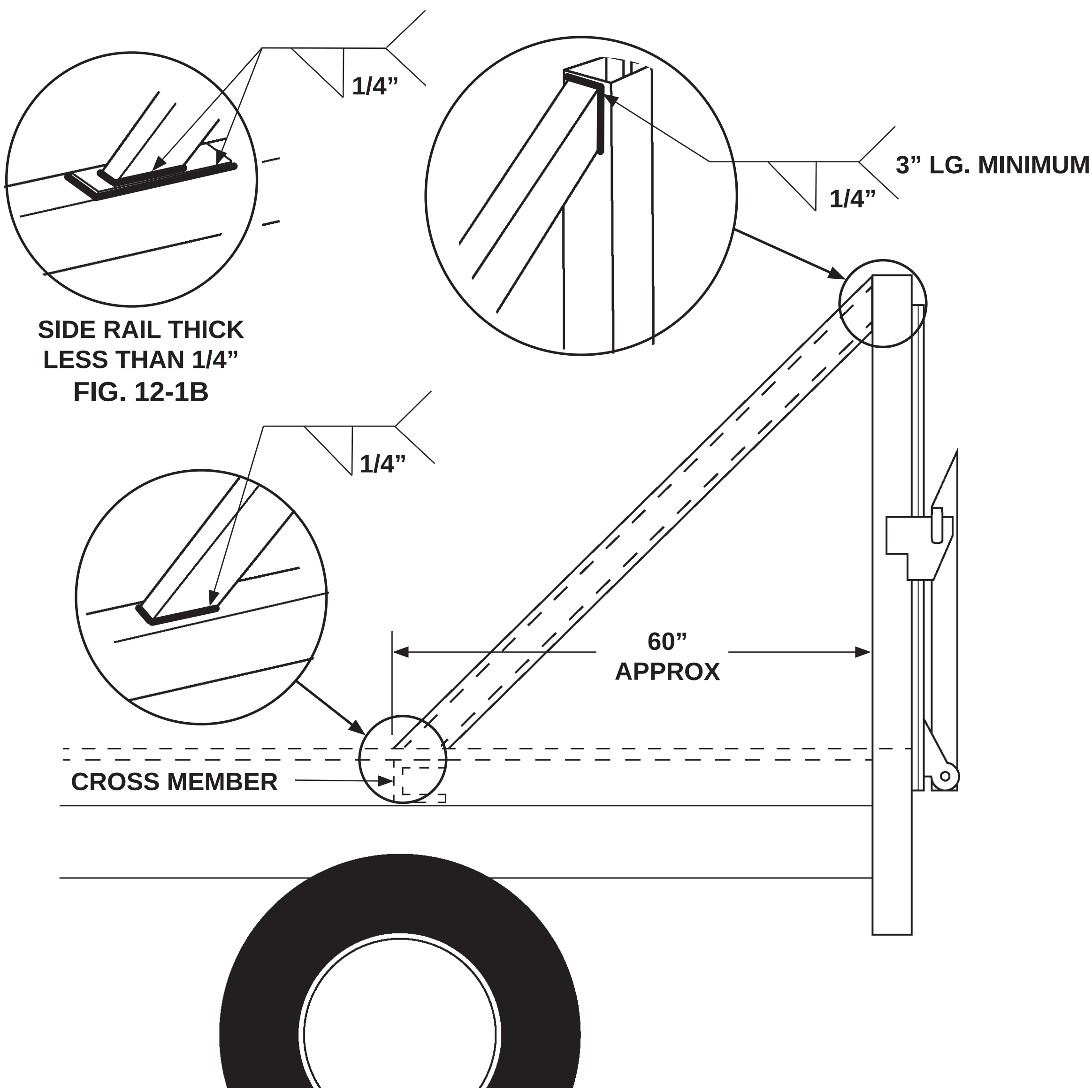
MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

WELDING LIFTGATE TO VEHICLE - Continued

WELDING PROCEDURE - FLAT BED VEHICLE

The column assemblies are tied in to the flat bed side rails with two lengths of channel as shown in **FIG. 12-1A**. Weld column assembly to its corresponding side rail to a distance of 60” approximately, just above a cross member **(FIG. 12-1A)**. If side rail is less than 1/4”, weld a 1/4” plate to side rail, then weld channel to 1/4” plate as shown in **FIG. 12-1B.**

NOTE: Mounting channel is not supplied by MAXON.



SIDE RAIL THICK LESS THAN 1/4”
FIG. 12-1B

WELDING LIFTGATE TO FLAT BED VEHICLE
FIG. 12-1A

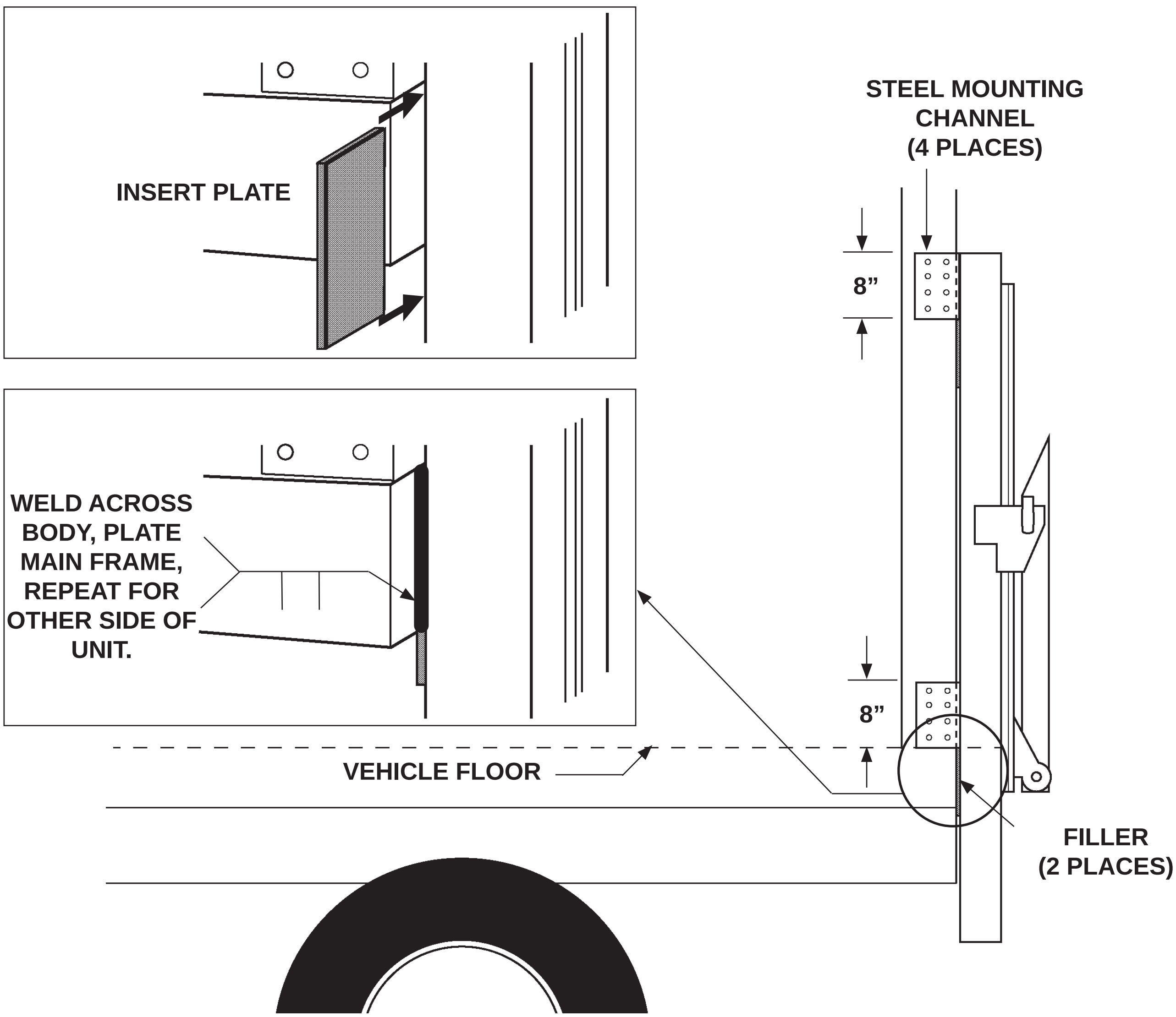
MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

WELDING LIFTGATE TO VEHICLE - Continued

WELDING PROCEDURE - ALUMINUM FRAME VEHICLES

Four steel mounting channels will need to be fabricated **before** hoisting unit up to vehicle. The mounting channels will be riveted to the aluminum frame **before** installing the unit. The required mounting dimensions are shown in **FIG. 13-1**.
To fill gap between body and rear of main frame, fabricate 2 pieces of 10 GA 8” x 4”(**FIG. 13-1**). See pages 14 and 15 for details of installation.

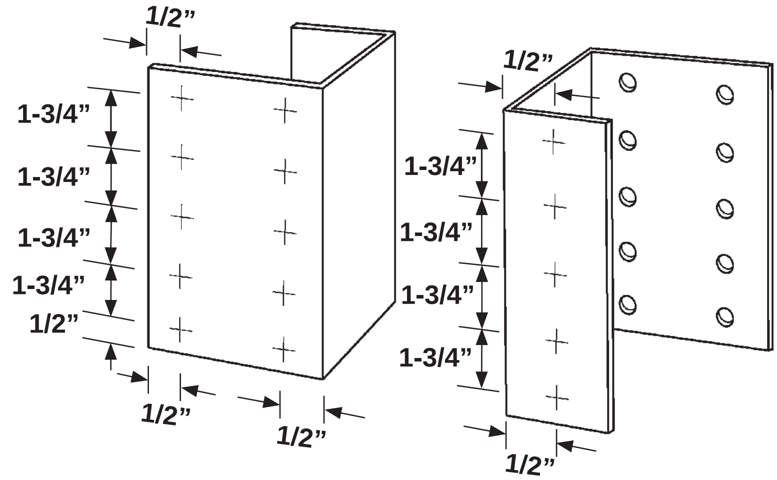
NOTE: Mounting channel is not supplied by MAXON.



POSITIONING STEEL MOUNTING CHANNELS AND FILLER TO ALUMINUM FRAME VEHICLE
FIG. 13-1

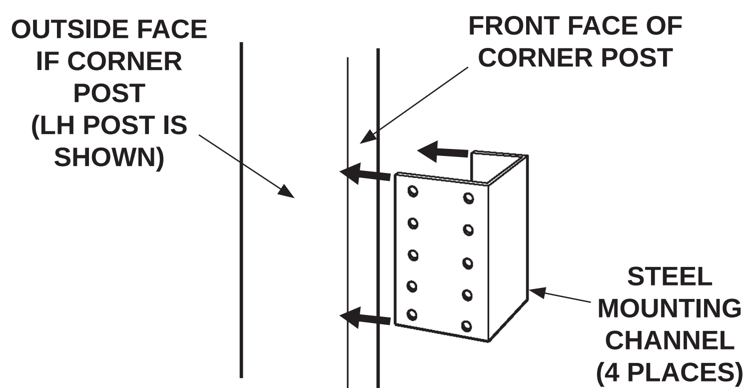
WELDING LIFTGATE TO VEHICLE - Continued

Steel mounting channels shall be 10 gauge material, 8” in length (**FIG. 14-1).** All other dimensions shall suit dimensions of vehicle corner posts. Drill 10 holes to larger side of mounting channel, and 5 to smaller face. Drillings should be suitable to accept 1/4” drive rivets. **FIG. 14-1** shows locations for drillings.



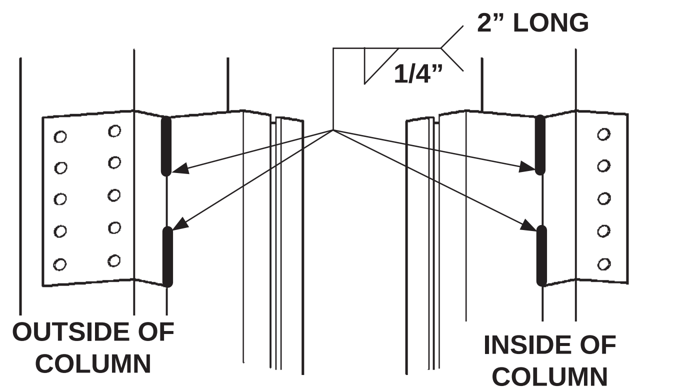
DRILLINGS LOCATIONS ON STEEL MOUNTING CHANNELS
FIG. 14-1

Position and rivet each steel mounting channel using 1/4” drive rivets as shown in **FIG. 14-2.** The 10 drilling face is located over outside face of corner post (**FIG. 14-2**). Position for upper and lower mounting channels is shown in **FIG. 13-1**.



POSITION AND RIVET STEEL MOUNTING CHANNELS TO VEHICLE CORNER POST
FIG. 14-2

After installing the 4 mounting channels, hoist unit into position and weld to mounting channels as shown in **FIG. 14-3.**



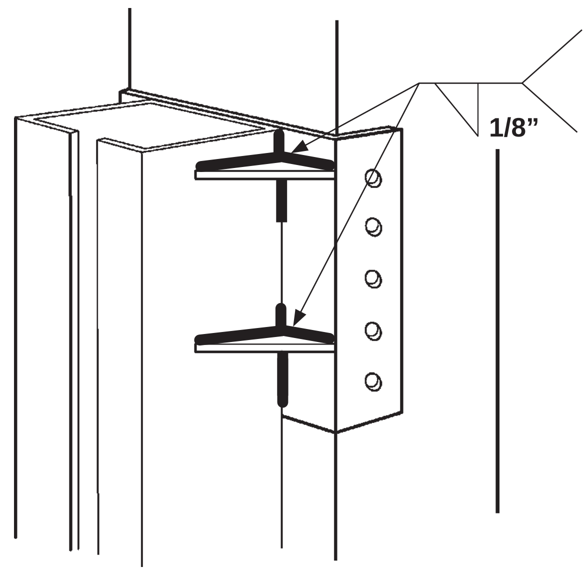
WELDING COLUMN ASSEMBLY TO STEEL MOUNTING CHANNEL (LH COLUMN IS SHOWN)
FIG. 14-3

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

WELDING LIFTGATE TO VEHICLE - Continued

INSIDE OF COLUMN ASSEMBLY

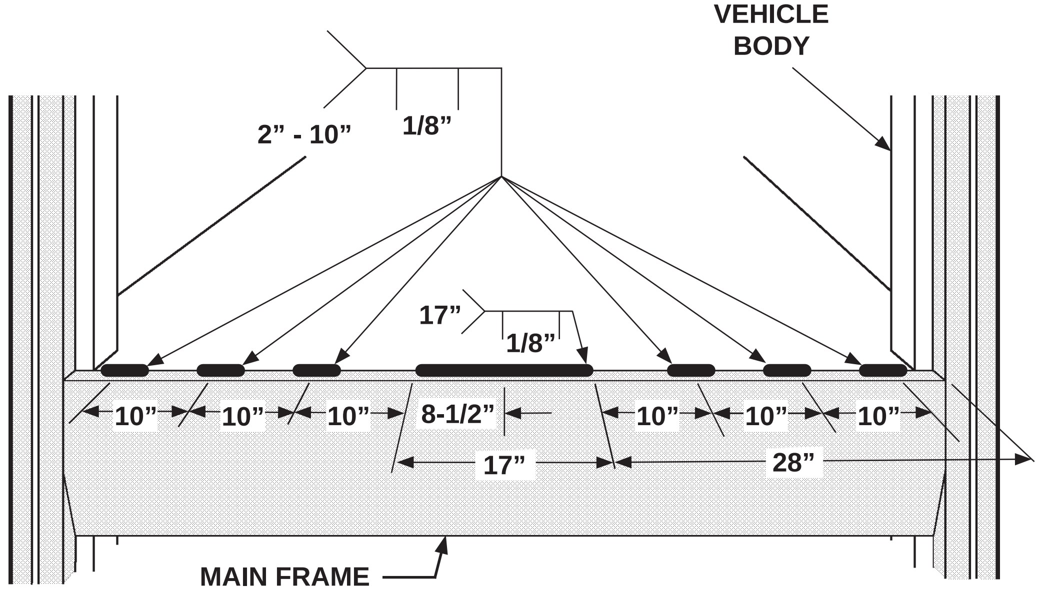
Weld two 1/8" gussets to channels and column assembly as shown in **FIG. 15-1**. The channel located at bottom of the column assembly is gusseted in an identical manner. Repeat for right head column assembly.



WELDING GUSSETS TO COLUMN ASSEMBLY AND CORNER POST (LH COLUMN ASSY IS SHOWN, INSIDE UPPER FACE)
FIG. 15-1

WELDING MAIN FRAME TO SILL

The rear of the **main frame** shall be welded to **sill** as illustrated in **FIG. 15-2**. Main frame upper side must be flush to sill upper side (**FIG. 15-2).** See **FIG. 15-2** for welding details.



WELDING MAIN FRAME TO SILL
FIG. 15-2

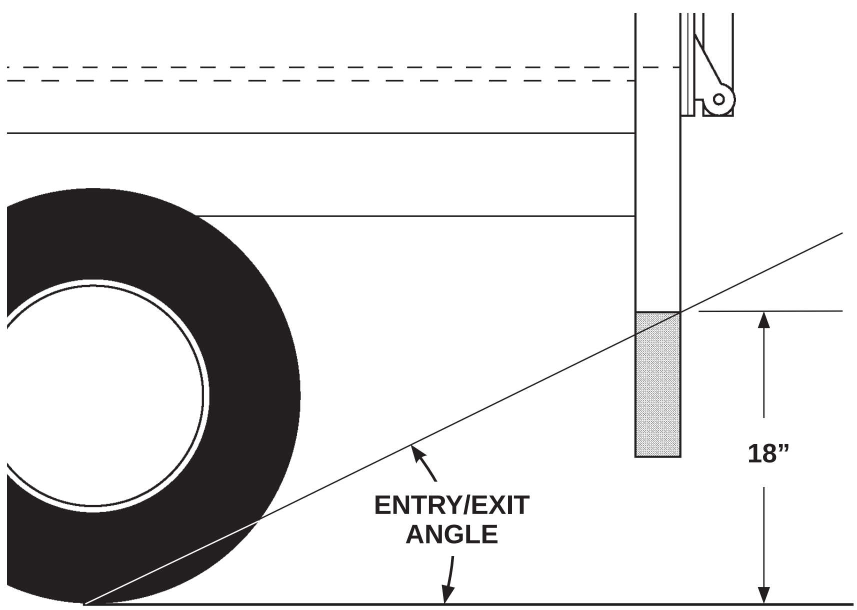
MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

WELDING LIFTGATE TO VEHICLE - Continued

CUTTING OFF LOWER PORTION OF COLUMN

The lower portion of the column can be cut off 18” (maximum) above the ground 18” (**FIG. 16-1)** to improve the entry and exit angle of the vehicle.

NOTE: Vehicles with **air ride suspension** must have air bags fully inflated before columns are cut 18” from ground.

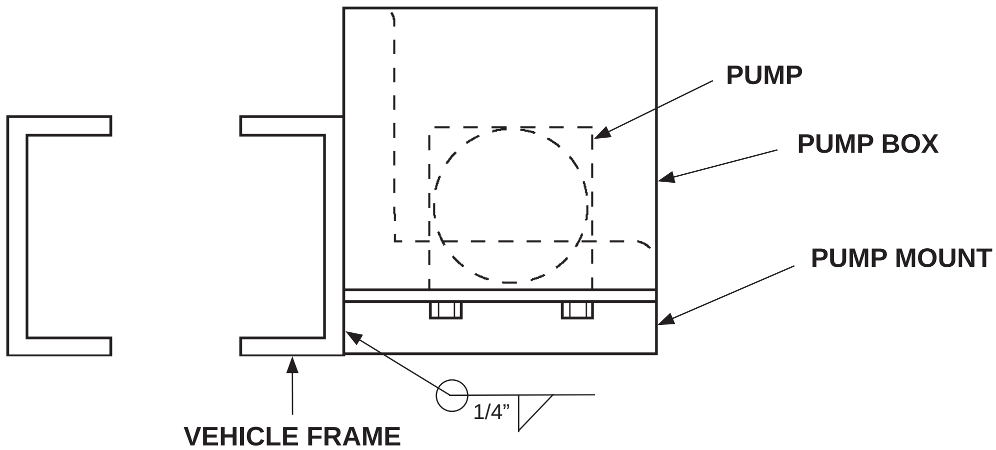


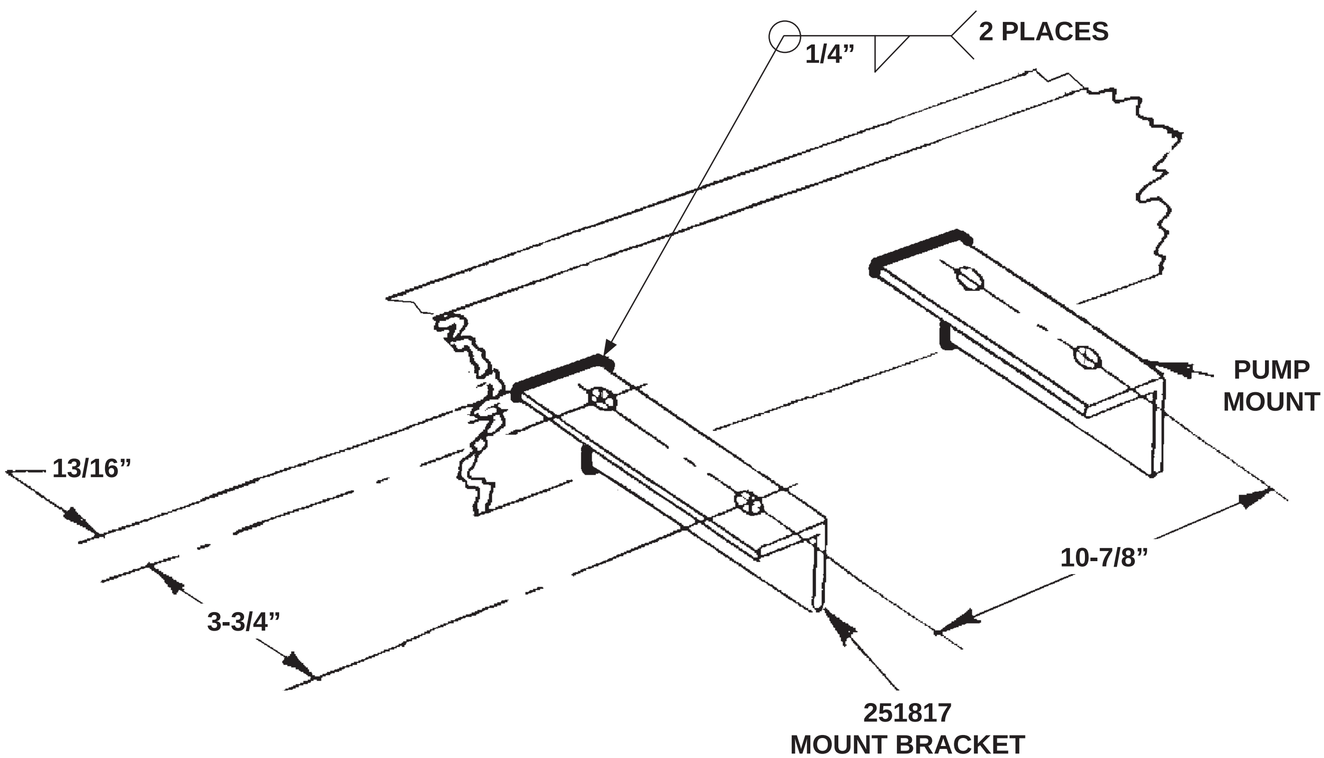
CUTTING OFF LOWER PORTION OF COLUMN
FIG. 16-1

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

INSTALLING PUMP & PUMP BOX

WELD ON PUMP MOUNT & BRACKET

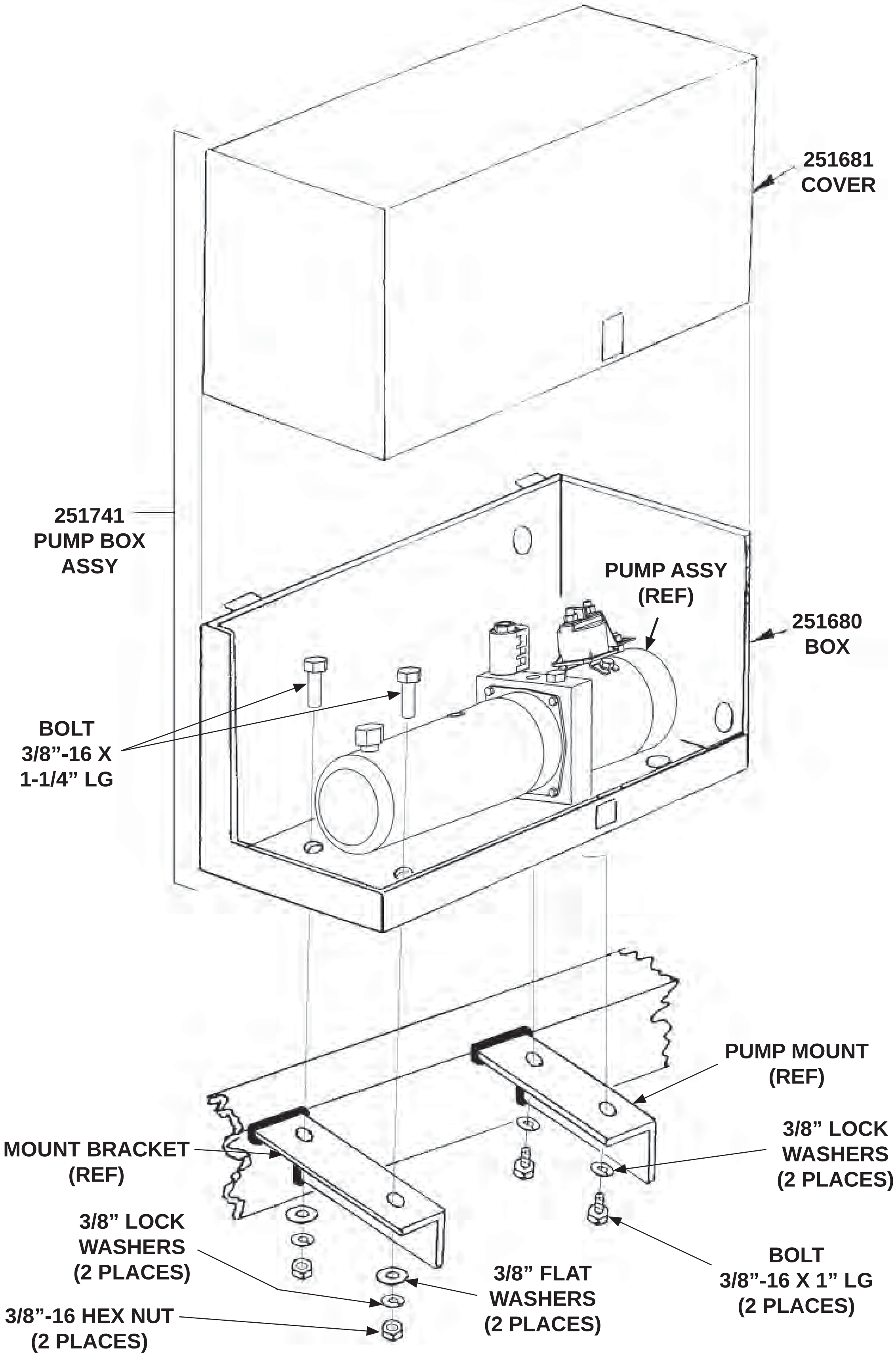




MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

INSTALLING PUMP & PUMP BOX - Continued

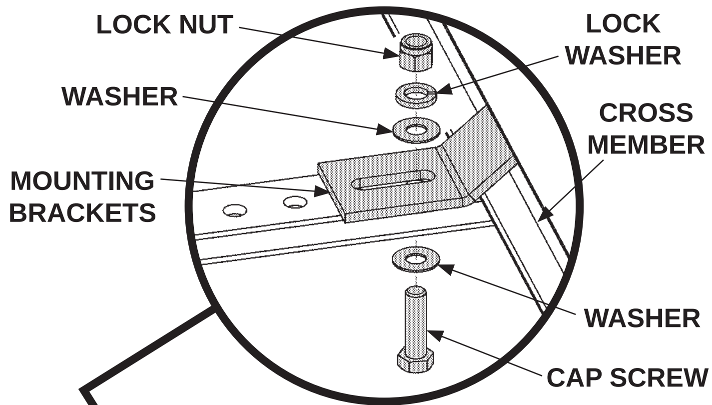
BOLT ON PUMP BOX & PUMP ASSEMBLY



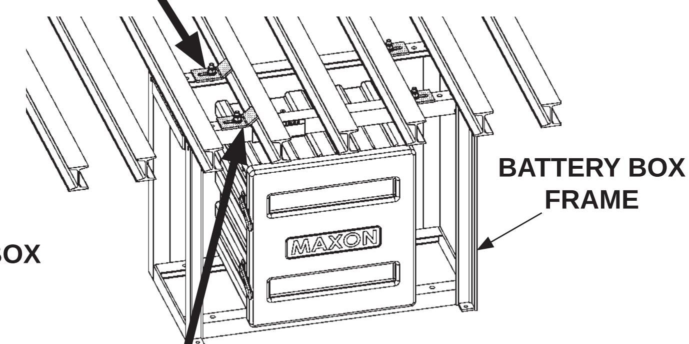
MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED)

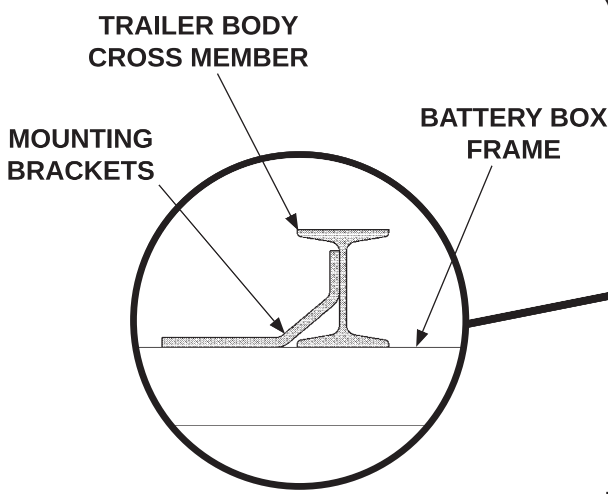
1. Select holes on top of battery box frame to align mounting brackets flush to cross members. Refer to **FIGS. 19-1A & 19-1B** for trailers and **FIG. 19-2** for trucks. Bolt mounting brackets to battery box frame as shown in **FIG. 19-1C**. Torque each bolt and lock nut to **85-128 lb-ft**.



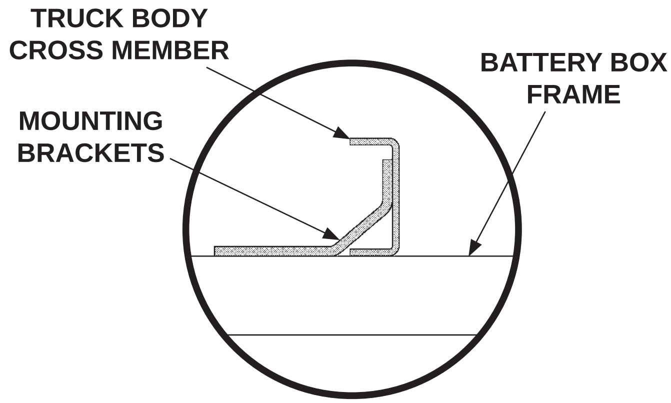
BOLTING BRACKETS (8 PLACES) FIG. 19-1C



ALIGNING BATTERY BOX FRAME (TRAILER SHOWN) FIG. 19-1A



FLUSH BRACKETS FOR TRAILERS (8 PLACES) FIG. 19-1B



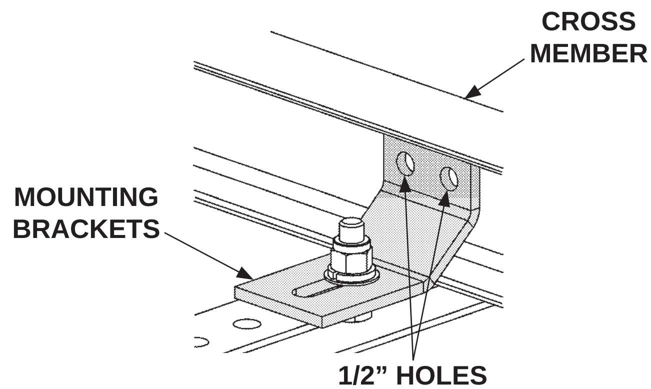
FLUSH BRACKETS FOR TRUCKS (8 PLACES) FIG. 19-2

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

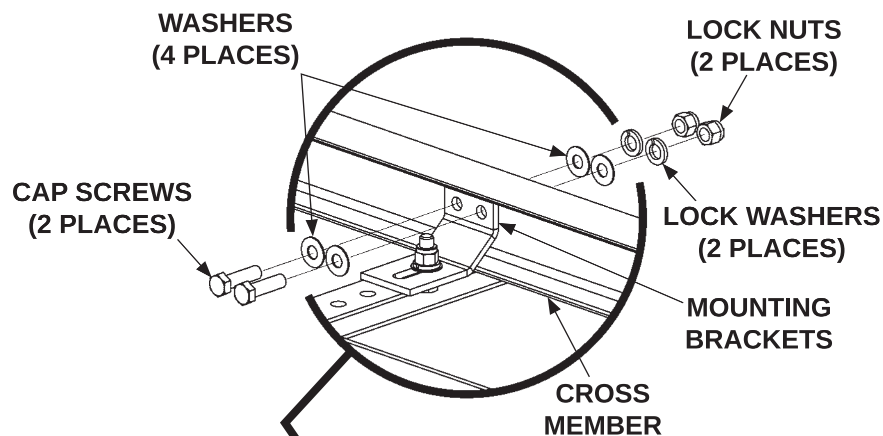
ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED) - Continued

NOTE: If welding mounting brackets to cross members, skip instruction **2**.

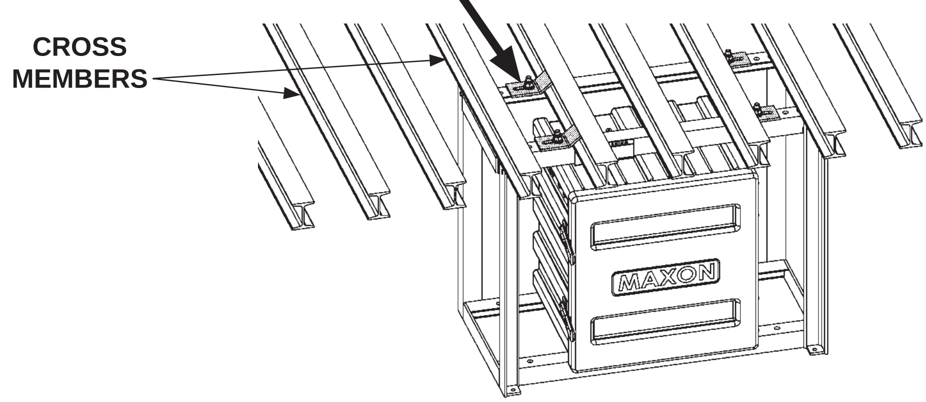
2. Using mounting brackets as a template mark and drill holes through cross members **(FIG. 20-1)**. Bolt mounting brackets to cross members as shown in **FIGS. 20-2A and 20-2B**. Torque bolts and lock nuts to **85-128 lb-ft**.



MARK AND DRILL
FIG. 20-1



BOLTING BRACKETS (8 PLACES)
FIG. 20-2B



BOLTING BATTERY BOX FRAME
FIG. 20-2A

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED) - Continued

⚠ WARNING

Recommended practices for welding on steel parts are contained in the current AWS (American Welding Society) D1.1 Structural Welding Code - Steel. Damage to Liftgate and/or vehicle, and personal injury can result from welds that are done incorrectly.

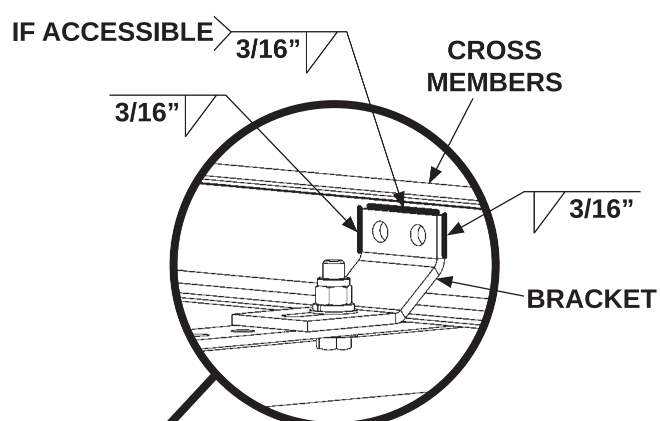
CAUTION

To prevent pump box components from being damaged by electric current from welding, connect welder grounding cable to the part being welded.

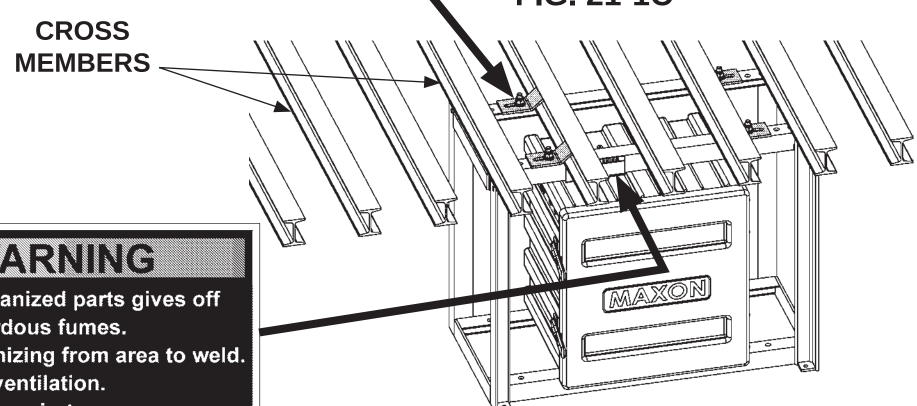
CAUTION

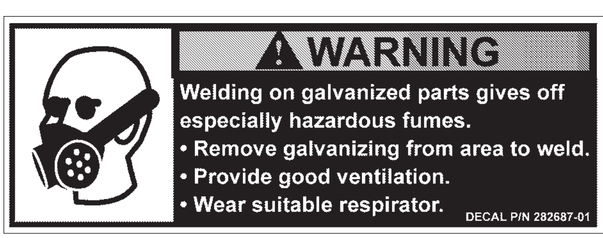
Cover pump box and optional battery box with flame-resistant covering before welding pump box frame to vehicle.

3. For galvanized frame, read warning decal shown in **FIGS. 21-1A and FIGS. 21-1B** before welding. Weld each bracket to cross members as shown in **FIGS. 21-1A and 21-1C**. Weld top of bracket if accessible.



WELDING BRACKETS (8 PLACES) FIG. 21-1C





WELDING GALVANIZED, WARNING DECAL FIG. 21-1B

BOLTING PUMP & BATTERY BOX FRAME FIG. 21-1A

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED) - Continued

⚠ WARNING

Remove all rings, watches and jewelry before doing any electrical work.

NOTE: Always connect fused end of power cable to battery positive **(+)** terminal.

NOTE: To connect charge lines, refer to instructions provided with each charge line kit.

NOTE: MAXON recommends using dielectric grease on all electrical connections.

4. Connect battery cables, fused cables, and ground cables as shown in **FIG. 22-1**.

ELECTRICAL COMPONENTS - BATTERY BOX

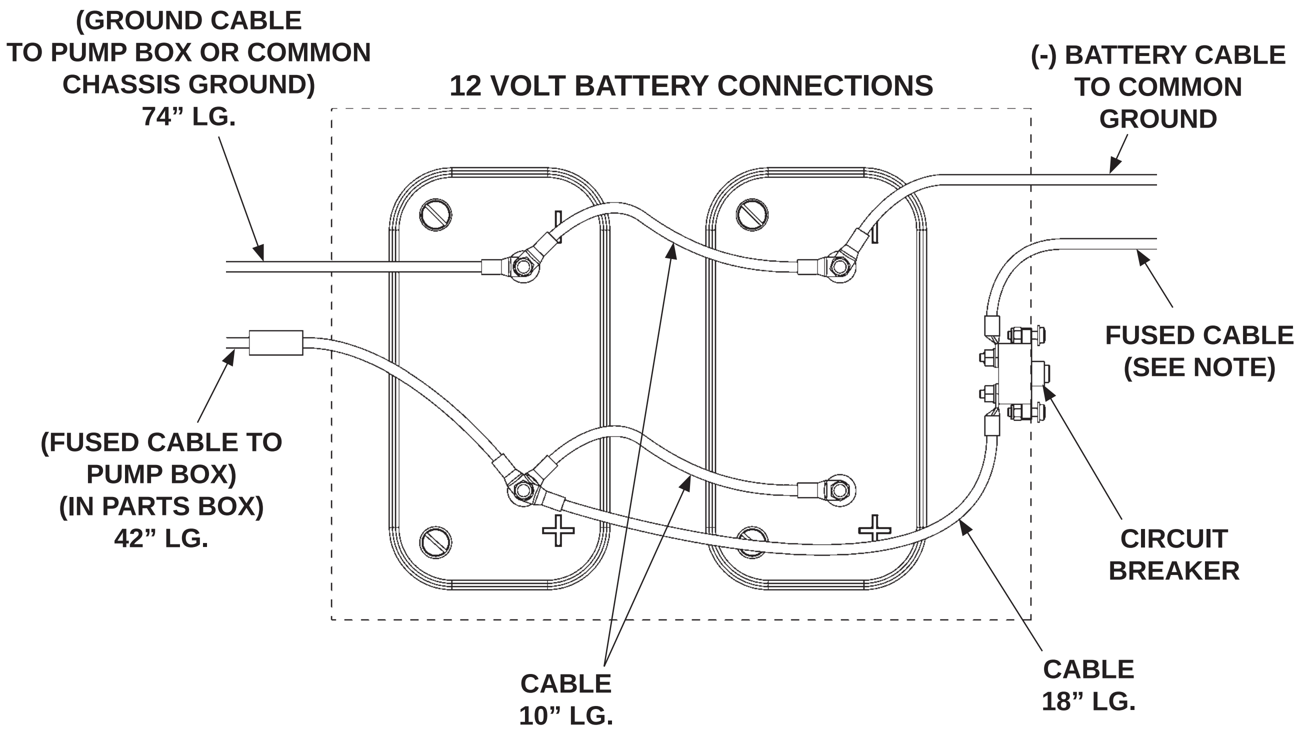


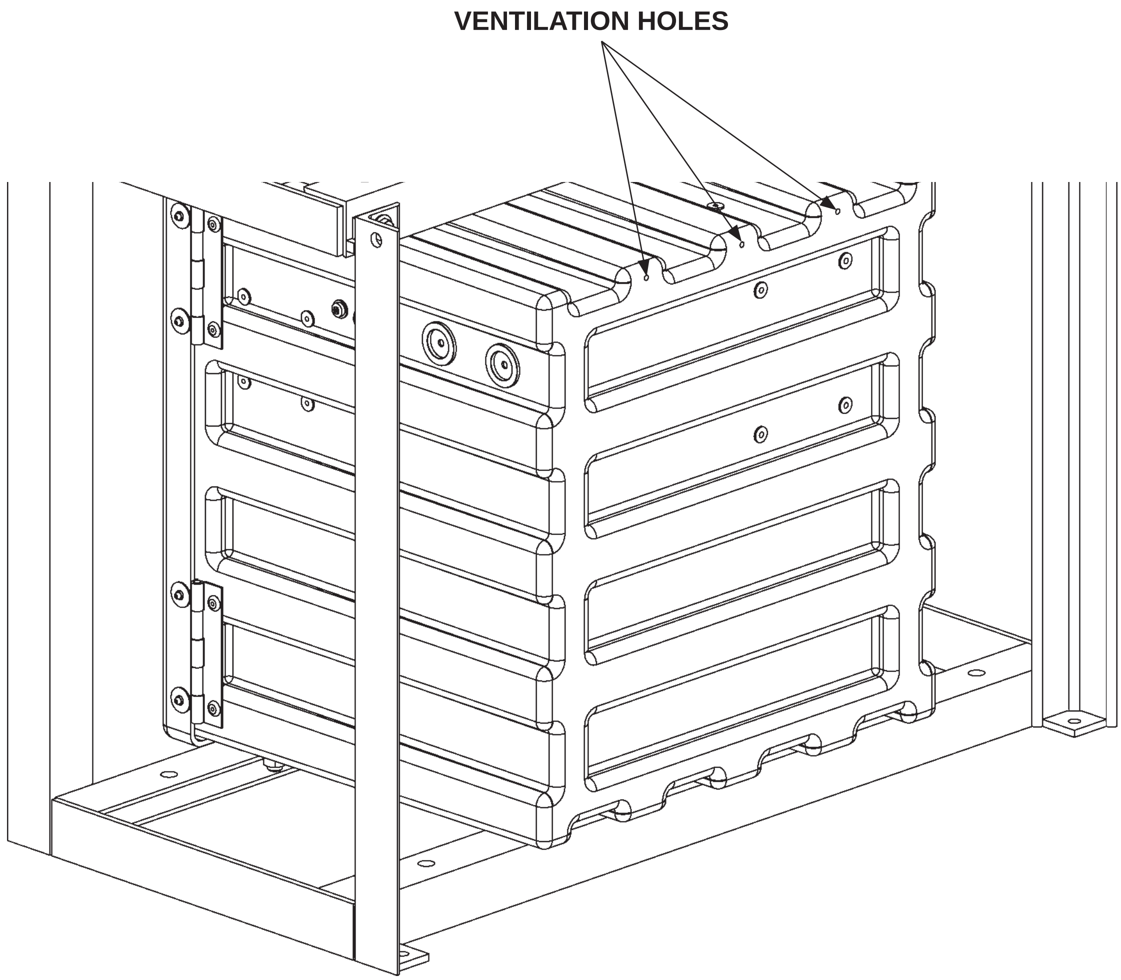
FIG. 22-1

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED) - Continued

⚠ WARNING

Explosive hydrogen gas from charging batteries can accumulate in battery box if not vented from the box. To prevent hydrogen gas from accumulating, ensure the 3 ventilation holes in battery box are not plugged or covered.



BATTERY BOX ASSEMBLY
(REAR VIEW SHOWN)
FIG. 23-1

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

ATTACH OPTIONAL BATTERY BOX & FRAME TO VEHICLE (IF EQUIPPED) - Continued

BATTERY BOX ASSEMBLY

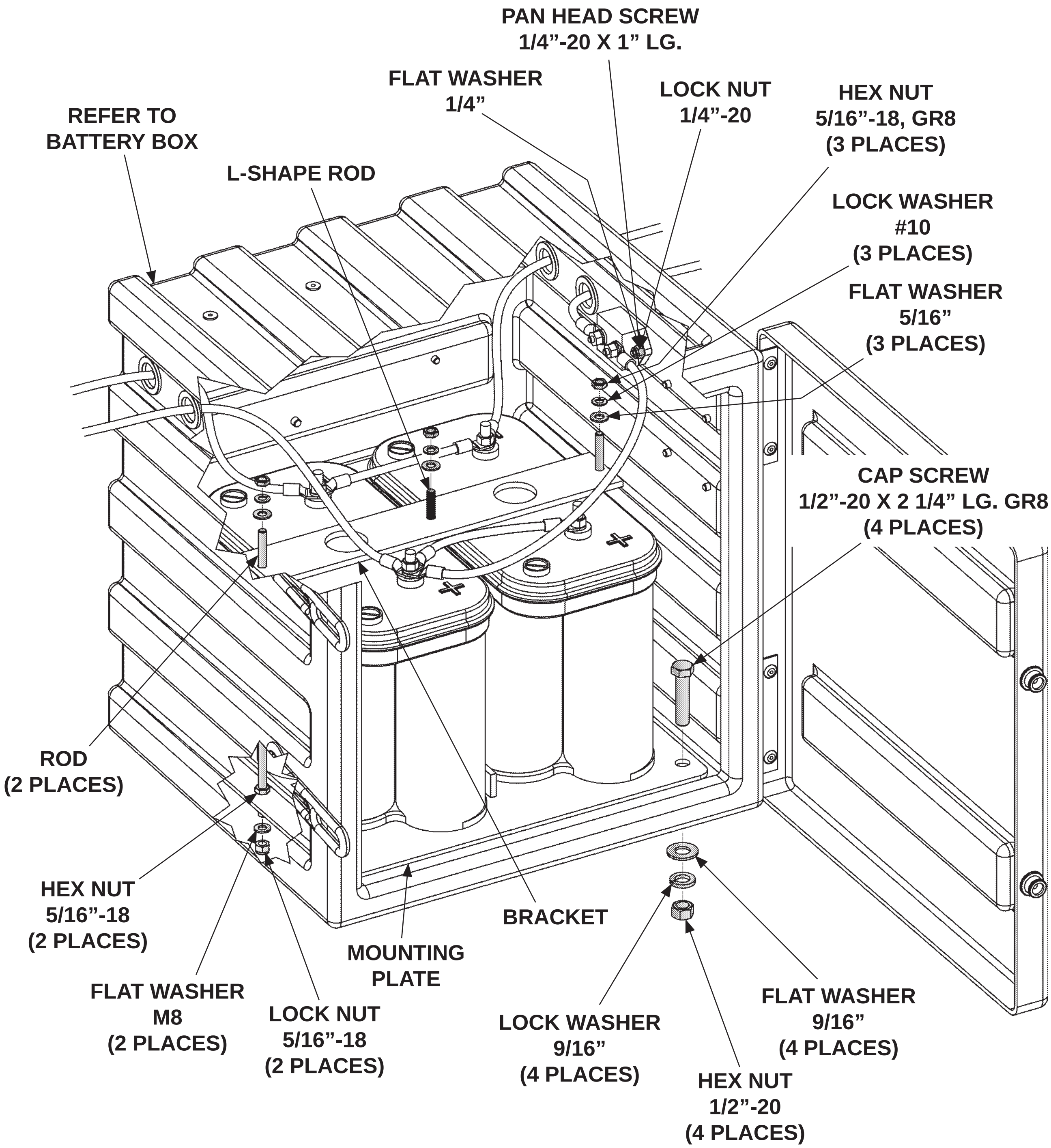


FIG. 24-1

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

RUNNING POWER CABLE

⚠ CAUTION

Never route an energized wire. Make sure the vehicle battery is disconnected. Always route electrical wires clear of moving parts, brake lines, sharp edges and exhaust systems. Avoid making sharp bends in wiring. Attach securely. If drilling is necessary, first check behind the drilling surface to prevent damage to any fuel lines, vent lines, brake lines or wires.

NOTE: Make sure cable is long enough to reach positive terminal on Liftgate pump box without putting tension on the cable.

Install vehicle charge line by running the line along the inside of vehicle frame **(FIG. 25-1)**. Make sure **175 amp fuse (FIG. 25-1)** end of cable is by the battery. Run the charge line from vehicle battery to Liftgate pump box positive terminal. Use frame clips (parts box item) and plastic ties (as required) from charge line kit to secure cable.

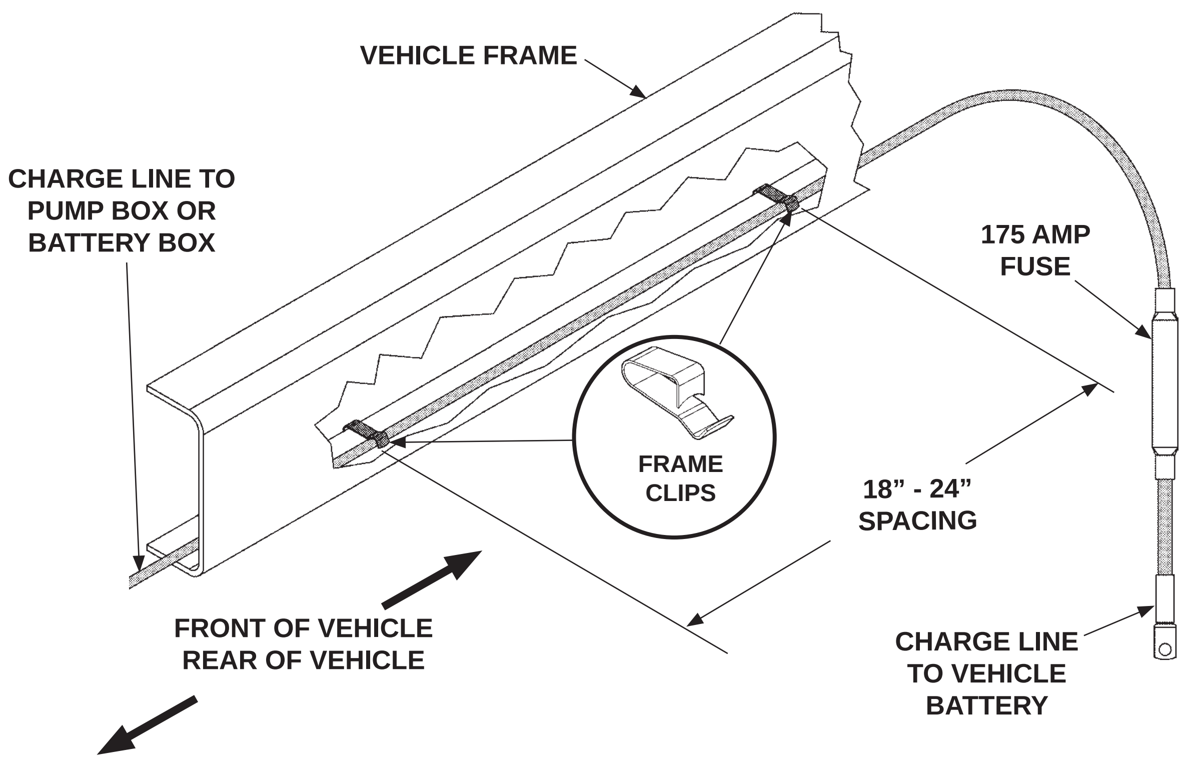


FIG. 25-1

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

RUNNING POWER CABLE - Continued

FRAMELESS - REFRIGERATION/SMOOTH UNDERSIDE TRAILER

⚠ CAUTION

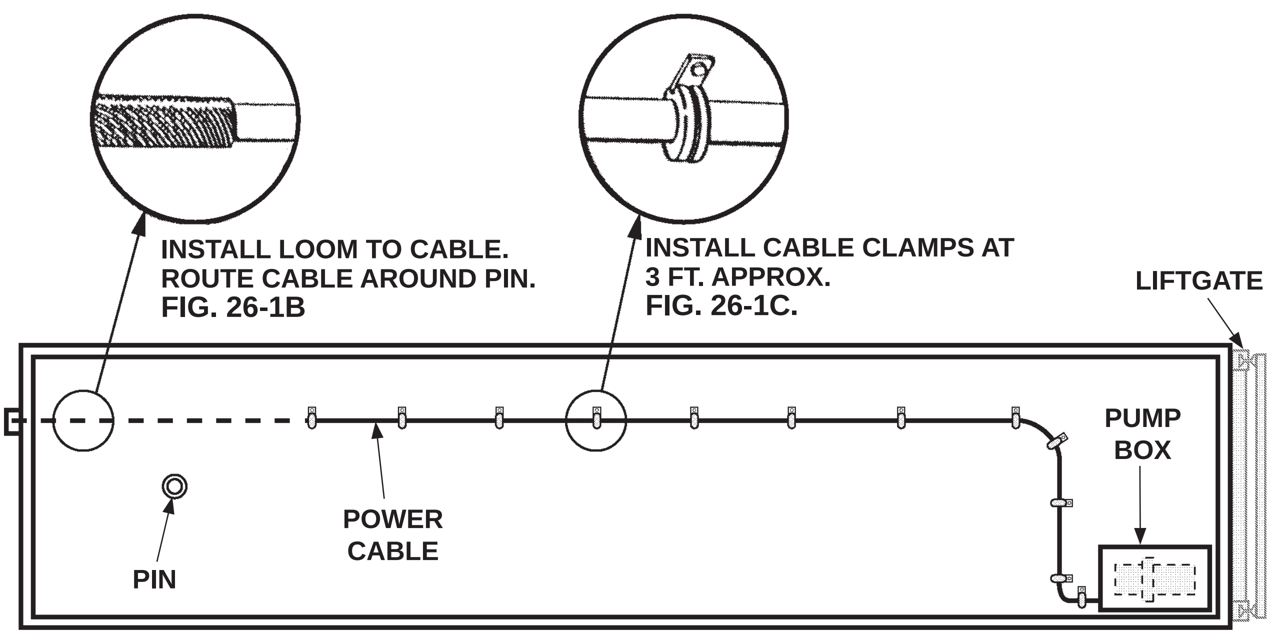
Never route an energized wire. Make sure the vehicle battery is disconnected. Always route electrical wires clear of moving parts, brake lines, sharp edges and exhaust systems. Avoid making sharp bends in wiring. Attach securely. If drilling is necessary, first check behind the drilling surface to prevent damage to any fuel lines, vent lines, brake lines or wires.

NOTE: Make sure cable is long enough to reach positive terminal on Liftgate pump box without putting tension on the cable.

Run **power cable** from trailer nose to tail of trailer underside (**FIG. 26-1A)**. Route cable around pin (**install loom to protect power cable**) as shown in **FIG. 26-1B.**

Install cable clamps every 3 ft. approximately as illustrated in **FIG. 26-1C**.

NOTE: Loom and cable clamps are supplied in installation kit.



RUNNING POWER CABLE ON REFRIGERATION/ SMOOTH BASE TRAILER (UNDERSIDE VIEW)
FIG. 26-1A

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

RUNNING POWER CABLE - Continued
FRAMELESS - DRY VAN TRAILER

⚠ CAUTION

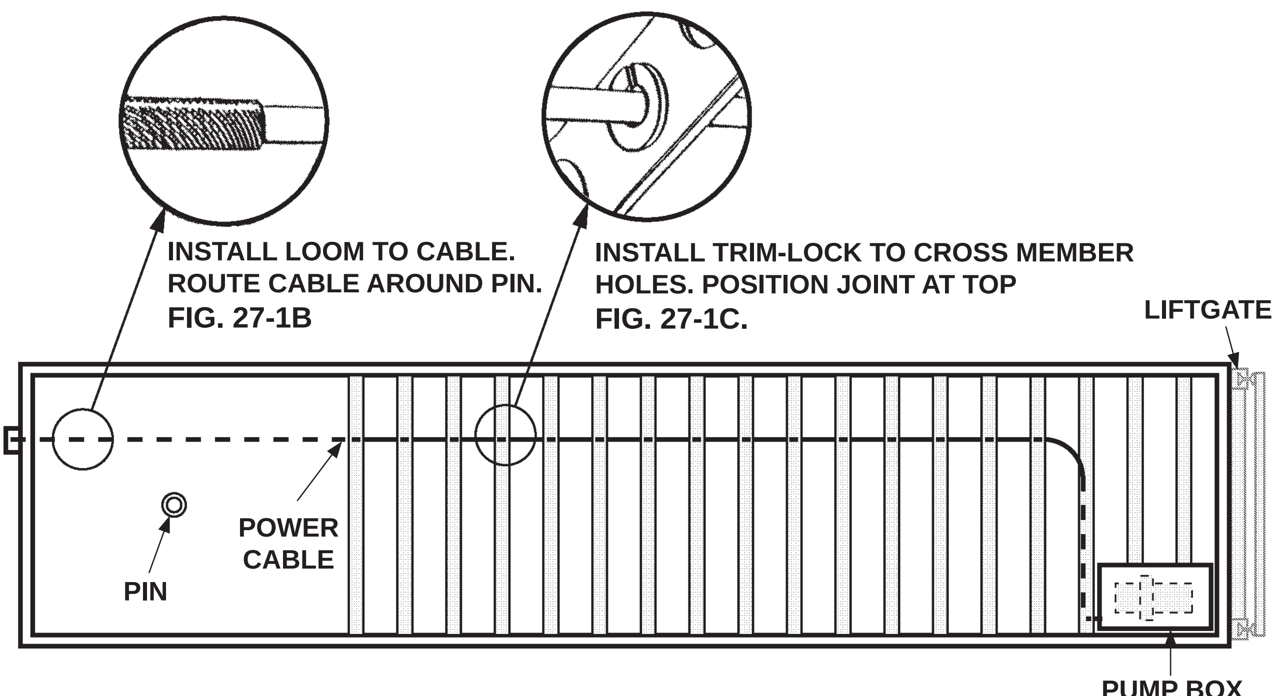
Never route an energized wire. Make sure the vehicle battery is disconnected. Always route electrical wires clear of moving parts, brake lines, sharp edges and exhaust systems. Avoid making sharp bends in wiring. Attach securely. If drilling is necessary, first check behind the drilling surface to prevent damage to any fuel lines, vent lines, brake lines or wires.

NOTE: Make sure cable is long enough to reach positive terminal on Liftgate pump box without putting tension on the cable.

Run **power cable** from trailer nose to tail of trailer underside (**FIG. 27-1A)**. Route cable around pin (**install loom to protect power cable**) as shown in **FIG. 27-1B.**

To fix and protect power cable, install trim-lock to cross member holes as illustrated in **FIG. 27-1C**.

NOTE: Loom and trim-lock is supplied in installation kit.



RUNNING POWER CABLE ON DRY VAN TRAILER (UNDERSIDE VIEW)
FIG. 27-1A

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

CONNECT POWER CABLE

1. Run power cable through hole in pump box wall **(FIG. 28-1A)**.

2. On the bare wire end of fused power cable, keep enough length to attach copper terminal lug and reach motor solenoid without putting tension on cable (after connection) **(FIG. 28-1A)**. Measure (if needed), and then cut excess cable from bare wire end of cable. Put heatshrink tubing (Parts Box item) **(FIG. 28-1B)** on the end of the cable and leave room for terminal lug. Crimp copper terminal lug (5/16” ring, Parts Box item) on the fused power cable and shrink the heatshrink tubing **(FIG. 28-1C)**.

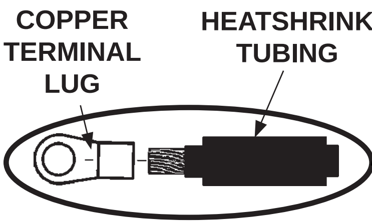


FIG. 28-1B

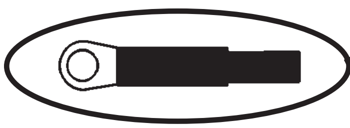
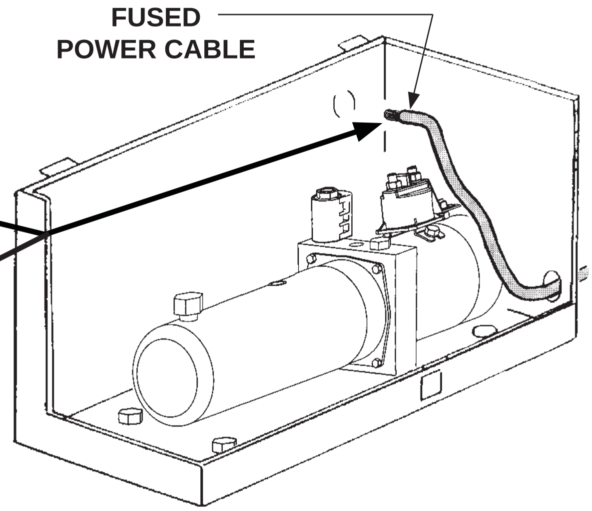


FIG. 28-1C



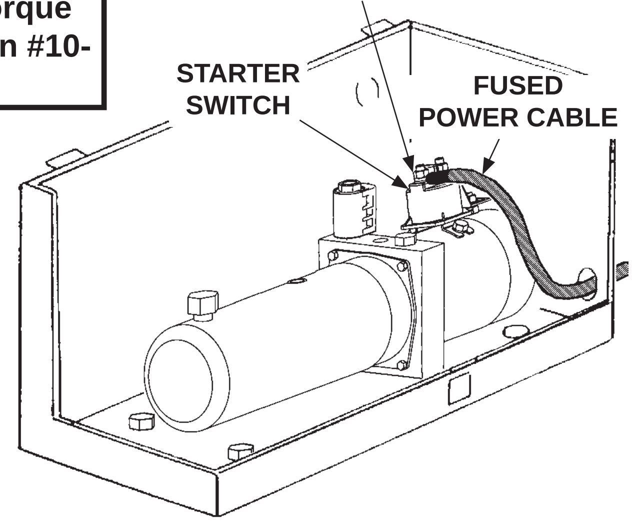
TYPICAL FUSED POWER CABLE ROUTING
FIG. 28-1A

CAUTION
Do not over-tighten the terminal nuts on starter switch. For the load terminals, torque nuts to 40 lb.-in. max. Torque the nuts on #10-32 control terminals 15-20 lb.-in.

NOTE: MAXON recommends using dielectric grease on all electrical connections.

NOTE: Do not remove flat washer from the battery power terminal.

3. Remove hex nut and lock washer from battery power terminal on the starter solenoid. Connect the fused power cable to the starter switch as shown in **FIG. 28-2**. Reinstall and tighten lock washer and hex nut.



CONNECTING POWER CABLE TO PUMP STARTER SWITCH
FIG. 28-2

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

CONNECT GROUND CABLE

NOTE: To ensure power unit is correctly grounded, MAXON recommends connecting 2 gauge ground cable from grounding bolt on pump manifold to grounding point on vehicle frame. Use remaining length of 2 gauge cable (Parts Box item) and 2 copper lugs (Parts Box item) to make ground cable.

1. Put heatshrink tubing (Parts Box item) **(FIG. 29-1)** on each end of ground cable and leave room for terminal lug. Crimp copper terminal lug (3/8" ring, Parts Box item) on each end of ground cable and shrink the heatshrink tubing **(FIG. 29-2)**.

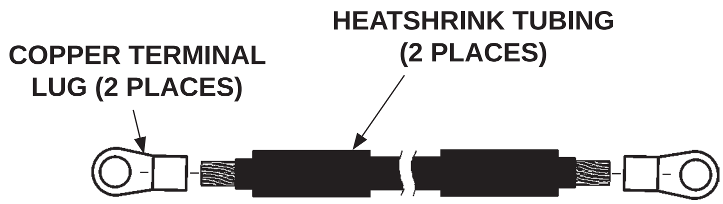


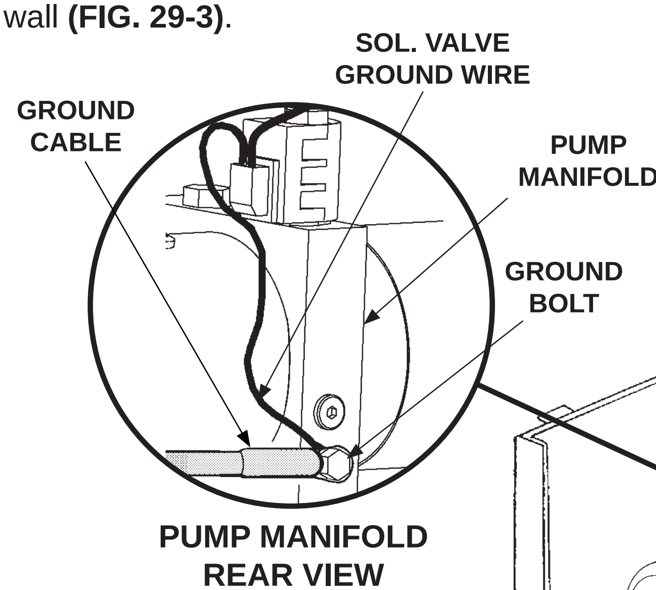
FIG. 29-1

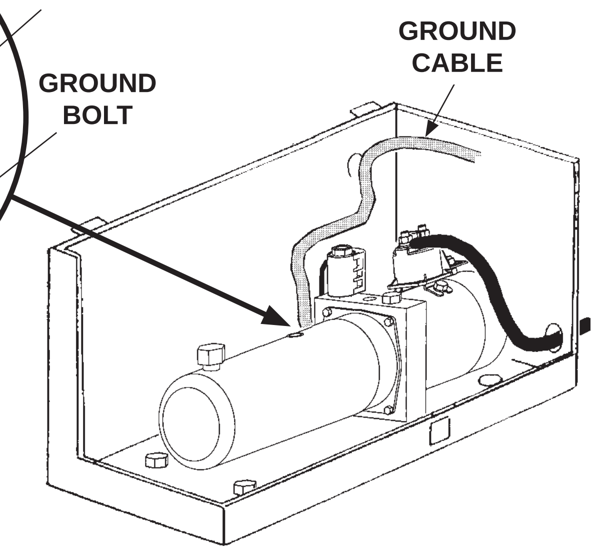


FIG. 29-2

NOTE: MAXON recommends using dielectric grease on all electrical connections.

2. Run ground cable through hole in pump box wall **(FIG. 29-3)**.





CONNECTING GROUND CABLE TO PUMP MANIFOLD
FIG. 29-3

3. Unbolt solenoid valve ground wire from pump manifold **(FIG. 29-3)**. Bolt ground cable lug and ground wire lug to pump manifold **(FIG. 29-3)**. Tighten bolt securely.

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

CONNECT GROUND CABLE - Continued

NOTE: If there is a grounding point on the frame, use it to connect ground cable. Then, skip the step for drilling a hole.

NOTE: Clean the ground cable connection point on the frame down to bare metal.

4. Extend the ground cable to reach vehicle frame **(FIG. 30-1)** without putting tension on cable (after connection). Connect to existing grounding point if available.

5. If necessary, drill a 11/32” (0.343”) hole in vehicle frame for bolting the ground cable terminal lug **(FIG. 30-1)**.

6. Bolt the ground cable terminal lug to vehicle frame as shown in **FIG. 30-1**.

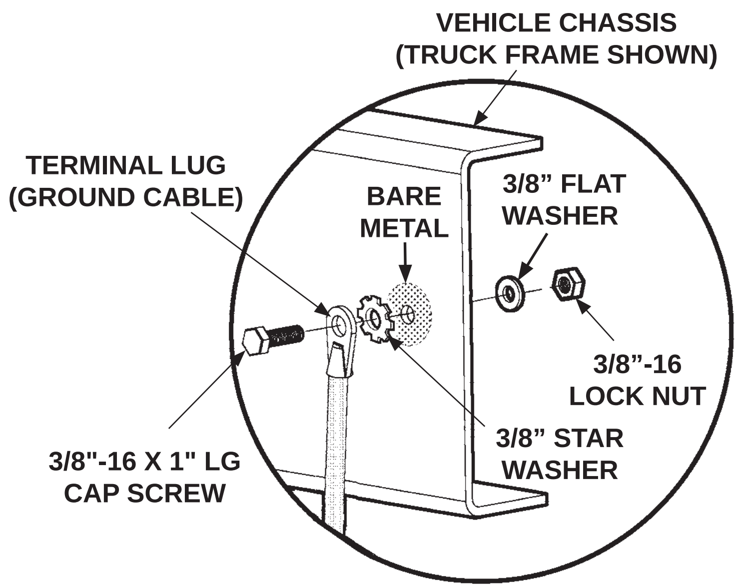
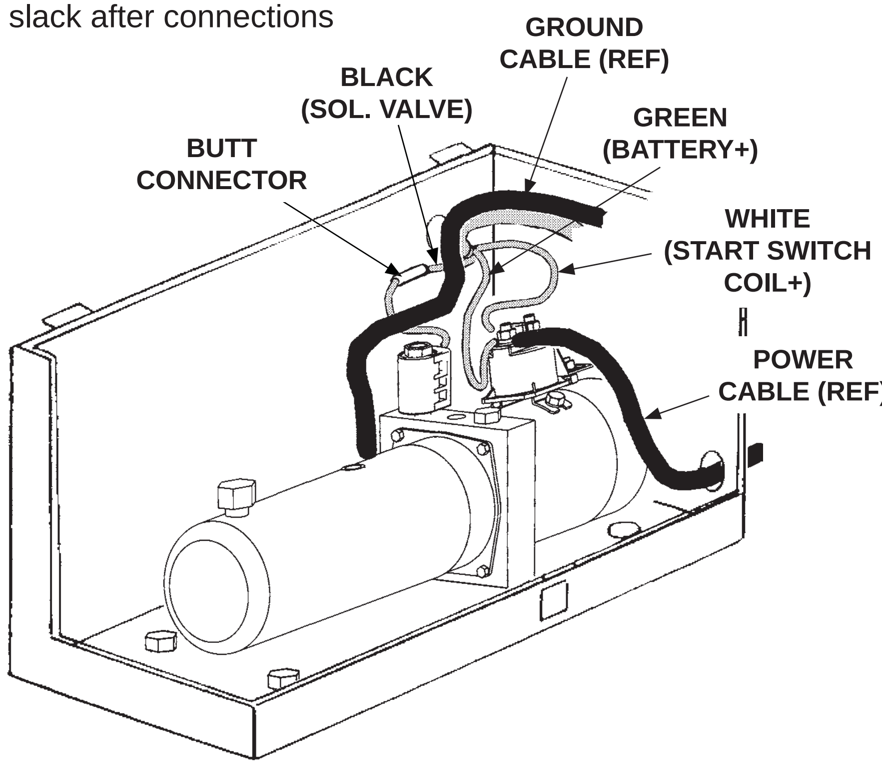


FIG. 30-1

CONNECT CONTROL WIRING

1. Extend the control switch cable through hole in pump box wall **(FIG. 31-1)**. Connect 3 control wires to solenoid valve and starter switch **(FIG. 31-1)**. Ensure wiring has slack after connections are made.



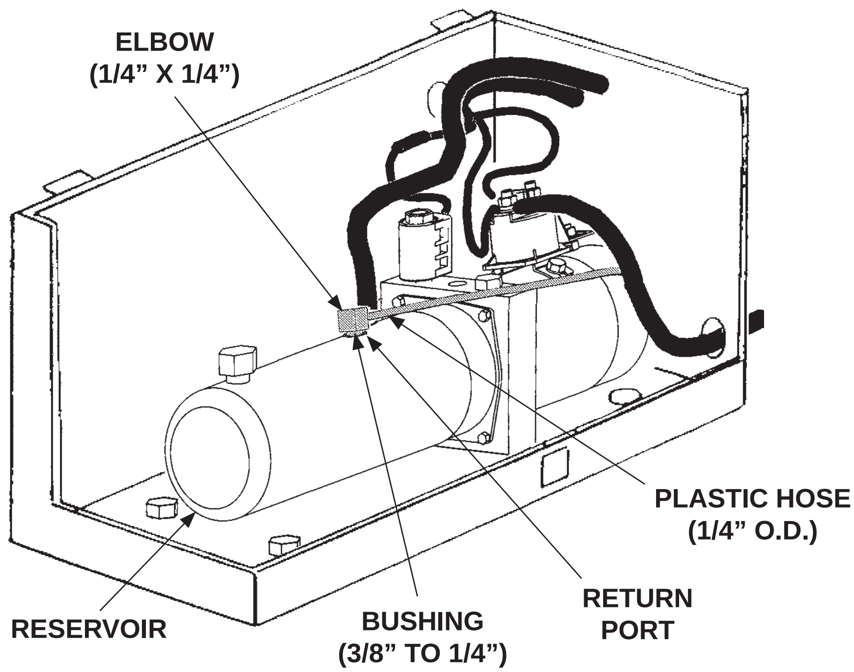
CONNECTING CONTROL SWITCH CABLE TO PUMP ASSEMBLY
FIG. 31-1

2. Connect 3 control wires to solenoid valve and starter switch as follows **(FIG. 31-1)**. Crimp butt connector on **BLACK** wire to open solenoid valve wire **(FIG. 31-1)**. Connect the 2 lugs on **GREEN** and **WHITE** wires to correct posts on starter switch **(FIG. 31-1)**. Ensure wiring has slack when connected.

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

CONNECT RETURN HOSE

1. Remove shipping plug from return port in reservoir **(FIG. 32-1)**.



RETURN HOSE CONNECTED TO PUMP RESERVOIR
FIG. 32-1

> **NOTE:** Apply thread sealant (Parts Box item) to hydraulic line connections.

2. Connect bushing and 1/4" x 1/4" elbow (Parts Box items) to return port on reservoir **(FIG. 32-1)**.

3. Connect return hose to elbow **(FIG. 32-1)**.

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

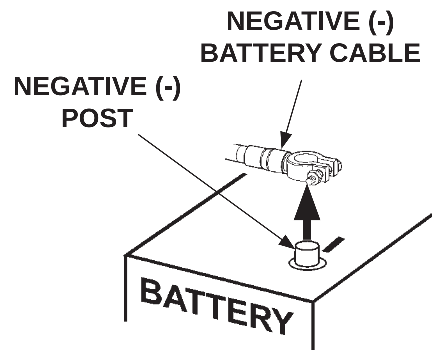
CONNECT POWER CABLE TO BATTERY

NOTE: MAXON recommends using dielectric grease on all electrical connections.

⚠ WARNING

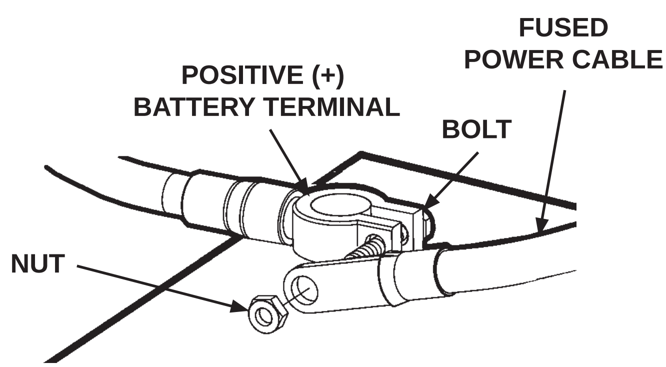
To prevent accidental personal injury and equipment damage, make sure power is disconnected from Liftgate while installing parts.

1. Disconnect power from Liftgate by disconnecting negative (-) cable from negative (-) post on battery **(FIG. 33-1)**.



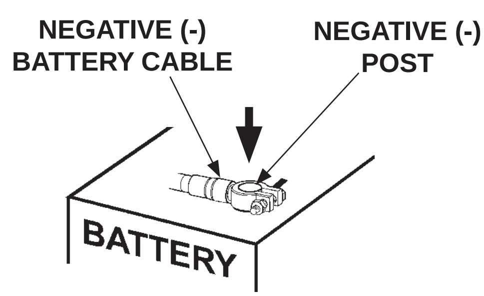
DISCONNECTING BATTERY
FIG. 33-1

2. Remove nut from positive **(+)** battery terminal connector. Connect power cable to the positive **(+)** battery terminal connector **(FIG. 33-2)**. Re-install and tighten nut.



CONNECTING POWER CABLE
FIG. 33-2

3. Reconnect power to Liftgate by reconnecting negative (**-**) cable to (**-**) negative post on battery **(FIG. 33-3)**.



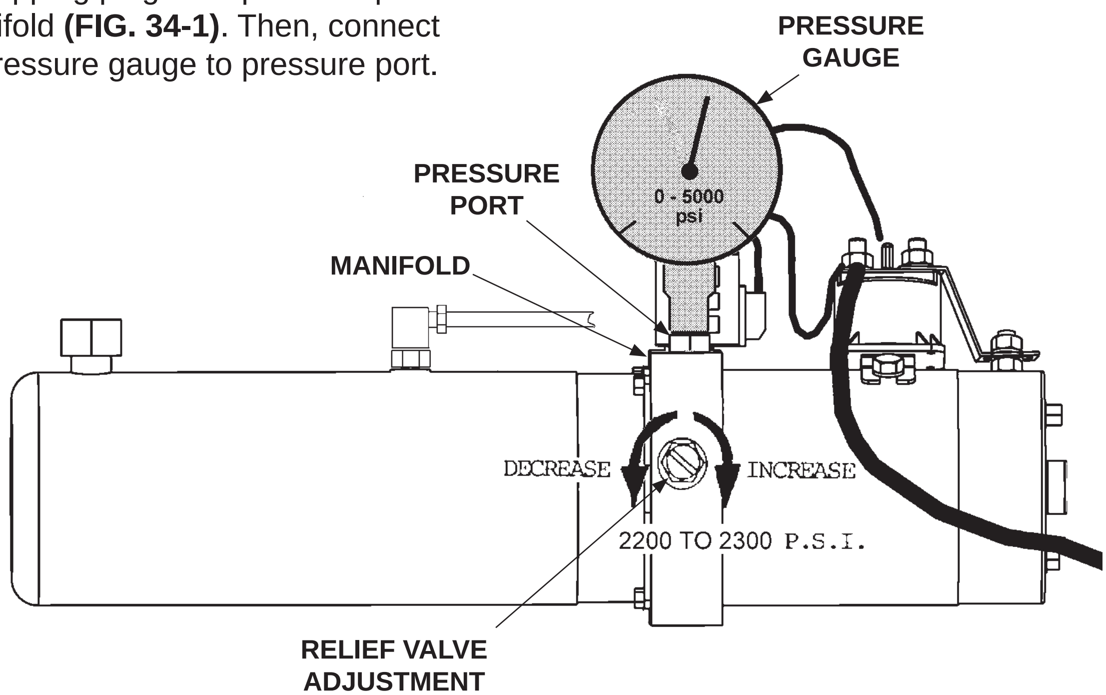
RECONNECTING BATTERY
FIG. 33-3

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

ADJUST PRESSURE RELIEF VALVE

NOTE: To set pressure relief valve, hydraulic pressure gauge must be connected to lifting port on pump manifold. Do the pump pressure relief valve adjustment before connecting pressure hose from cylinder.

1. Remove shipping plug from pressure port on pump manifold **(FIG. 34-1)**. Then, connect 5000 psi pressure gauge to pressure port.



ADJUSTING PRESSURE RELIEF VALVE
FIG. 34-1

2. Remove relief valve cover from manifold **(FIG. 34-1)**.

3. Hold control switch in **UP** position and observe pressure gauge **(FIG. 34-1)**. Turn relief valve adjustment until gauge reads 2200 to 2300 psi **(FIG. 34-1)**. Then release control switch.

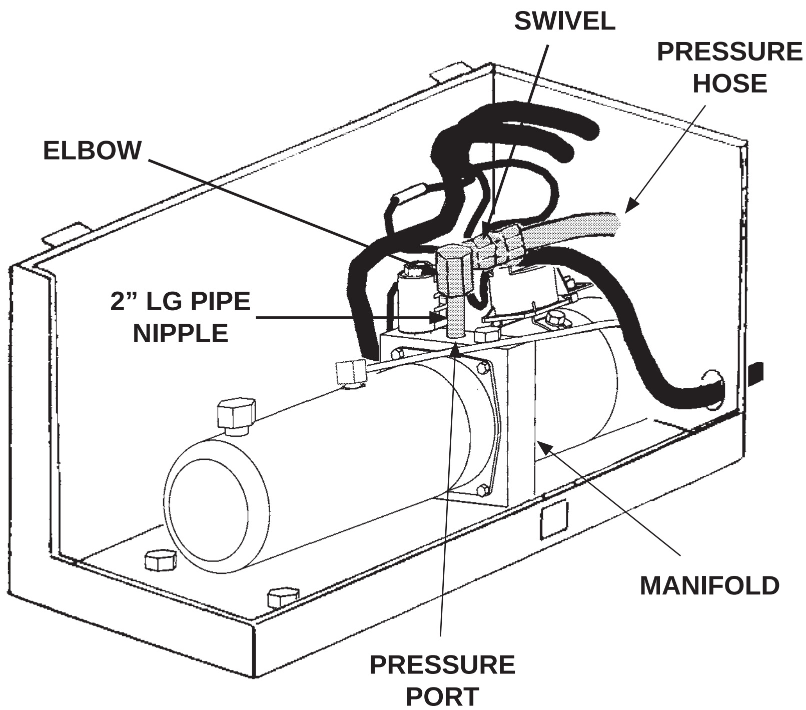
4. Reinstall relief valve cover. Then disconnect pressure gauge **(FIG. 34-1)**.

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

CONNECT PRESSURE LINE

NOTE: Apply thread sealant (Parts Box item) to hydraulic line connections.

1. Connect pipe nipple and swivel elbow (Parts Box items) to pressure port on pump manifold **(FIG. 35-1)**.



PRESSURE HOSE CONNECTED TO PUMP MANIFOLD
FIG. 35-1

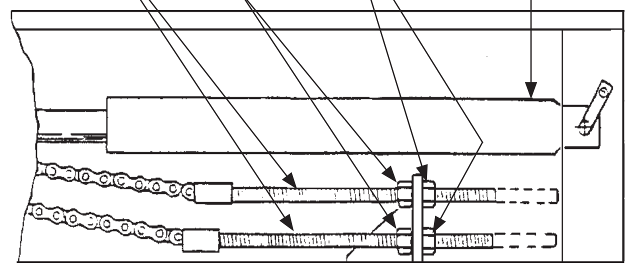
2. Connect pressure hose to swivel end of pipe nipple **(FIG. 35-1)**.

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

ADJUST DRIVE CHAINS (ABOVE BED MODELS)

NOTE: Vehicle body must be empty (unloaded) before performing the following adjustment.

1. Adjust drive chains as follows.



ADJUSTING DRIVE CHAIN
FIG. 36-1

2. Remove cover from cylinder housing. Loosen the lock nut on each chain adjusting rod **(FIG. 36-1)**. Then lower platform to ground level.

3. Turn each chain adjusting nut **(FIG. 36-1)** an equal amount of clockwise turns (alternate from chain to chain) until hydraulic cylinder is fully compressed. Then tighten the lock nut **(FIG. 36-1)** on each chain.

4. If either of the 2 chain rods are too long, cut off the excess as shown in **FIG. 36-1**.

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

CHECKING HYDRAULIC FLUID

CAUTION

Keep dirt, water and other contaminants from entering the hydraulic system. Before opening the hydraulic fluid reservoir filler cap, drain plug and hydraulic lines, clean up contaminants that can get in the openings. Also, protect the openings from accidental contamination.

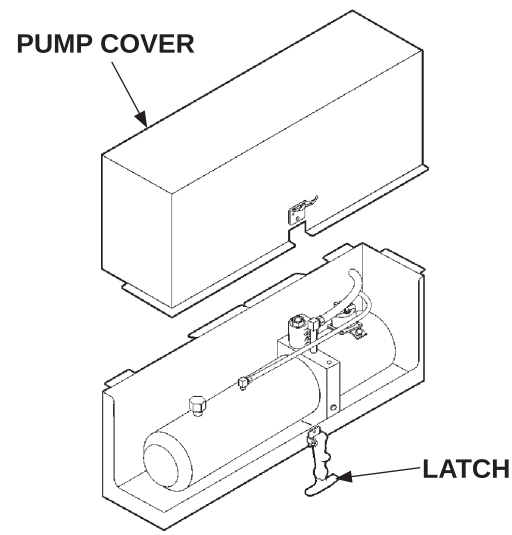
NOTE: Use correct grade of hydraulic fluid for your location.

+50 to +120 Degrees F - Grade ISO 32
Below + 70 Degrees F - Grade ISO 15 or MIL-H-5606

See **TABLES 38-1 and 38-2** for recommended brands.

1. Open and lower platform to ground level. Unfasten latch and remove the pump cover **(FIG. 37-1)** .

2. Remove threaded filler cap **(FIG. 37-2)**. Check the hydraulic fluid level in reservoir. Hydraulic fluid level should be 1” below the top of filler hole **(FIG. 37-2)**. If needed, add hydraulic fluid to fill the reservoir to the level shown in **FIG. 37-2**.



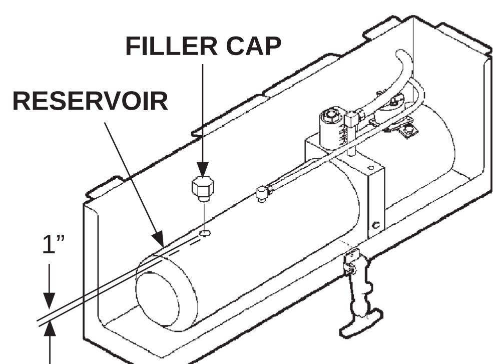
REMOVING / REINSTALLING PUMP COVER
FIG. 37-1

3. Reinstall filler cap **(FIG. 37-2)**.

CAUTION

Pump Cover must be correctly secured to prevent it from becoming a hazard. To secure Pump Cover, fasten the rubber latch on the Pump Box to the receiver on the Pump Box Cover.

4. Reinstall the pump cover and fasten latch **(FIG. 37-2)**.



CHECKING FLUID LEVEL
FIG. 37-2

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

CHECKING HYDRAULIC FLUID - Continued

ISO 32 HYDRAULIC OIL	
RECOMMENDED BRANDS	**PART NUMBER**
AMSOIL	AWH-05
CHEVRON	HIPERSYN 32
KENDALL	GOLDEN MV
SHELL	TELLUS S2 V32
EXXON	UNIVIS N-32
MOBIL	DTE-13M, DTE-24, HYDRAULIC OIL-13

TABLE 38-1

ISO 15 OR MIL-H-5606 HYDRAULIC OIL	
RECOMMENDED BRANDS	**PART NUMBER**
AMSOIL	AWF-05
CHEVRON	FLUID A, AW-MV-15
KENDALL	GLACIAL BLU
SHELL	TELLUS S2 V15
EXXON	UNIVIS HVI-13
MOBIL	DTE-11M
ROSEMEAD	THS FLUID 17111

TABLE 38-2

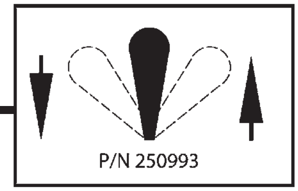
MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

ATTACHING DECALS

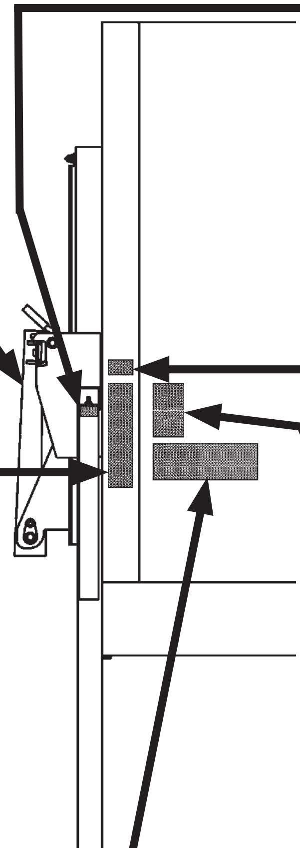
NOTE: Ensure there is no residue, dirt, or corrosion where decals are attached. If neccessary, clean surface before attaching decals.

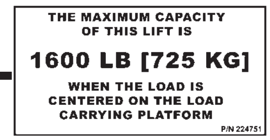


MAXPRO DECAL
P/N 265388-01



CONTROL SWITCH DECAL
P/N 250993





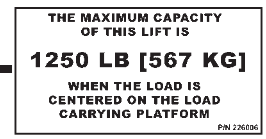
THE MAXIMUM CAPACITY OF THIS LIFT IS

1600 LB [725 KG]

WHEN THE LOAD IS CENTERED ON THE LOAD CARRYING PLATFORM

P/N 224751

CAPACITY DECAL
(RCM-1600 ONLY)
P/N 224751



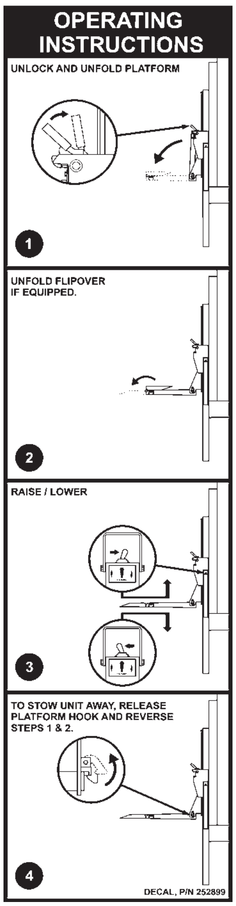
THE MAXIMUM CAPACITY OF THIS LIFT IS

1250 LB [567 KG]

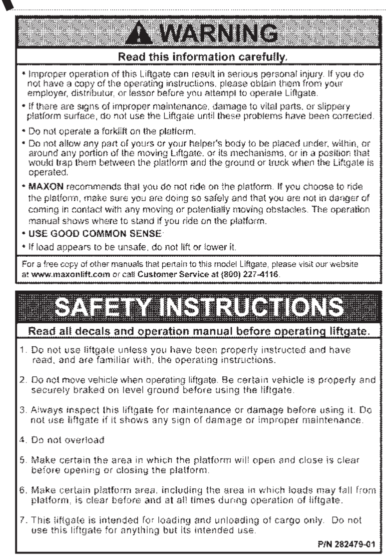
WHEN THE LOAD IS CENTERED ON THE LOAD CARRYING PLATFORM

P/N 226006

CAPACITY DECAL
(RCM-1250 ONLY)
P/N 226006



INSTRUCTION DECAL
P/N 252899



WARNING

Read this information carefully.

- Improper operation of this Liftgate can result in serious personal injury. If you do not have a copy of the operating instructions, please obtain them from your employer, distributor, or lessor before you attempt to operate Liftgate.
- If there are signs of improper maintenance, damage to vital parts, or slippery platform surface, do not use the Liftgate until these problems have been corrected.
- Do not operate a forklift on the platform.
- Do not allow any part of yours or your helper's body to be placed under, within, or around any portion of the moving Liftgate, or its mechanisms, or in a position that would trap them between the platform and the ground or truck when the Liftgate is operated.
- **MAXON** recommends that you do not ride on the platform. If you choose to ride the platform, make sure you are doing so safely and that you are not in danger of coming in contact with any moving or potentially moving obstacles. The operation manual shows where to stand if you ride on the platform.
- **USE GOOD COMMON SENSE**
- If load appears to be unsafe, do not lift or lower it.

For a free copy of other manuals that pertain to this model Liftgate, please visit our website at **www.maxonlift.com** or call **Customer Service at (800) 227-4116**.

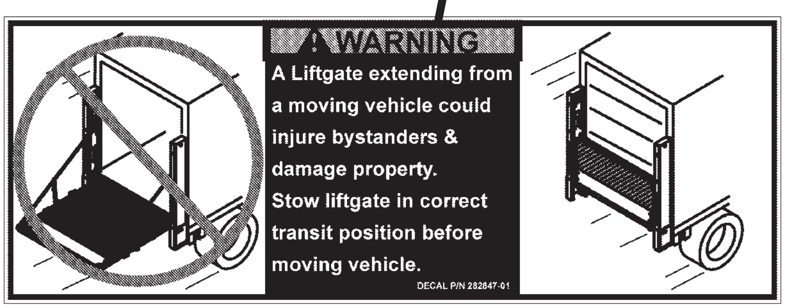
SAFETY INSTRUCTIONS

Read all decals and operation manual before operating liftgate.

1. Do not use liftgate unless you have been properly instructed and have read, and are familiar with, the operating instructions.
2. Do not move vehicle when operating liftgate. Be certain vehicle is properly and securely braked on level ground before using the liftgate.
3. Always inspect this liftgate for maintenance or damage before using it. Do not use liftgate if it shows any sign of damage or improper maintenance.
4. Do not overload
5. Make certain the area in which the platform will open and close is clear before opening or closing the platform.
6. Make certain platform area, including the area in which loads may fall from platform, is clear before and at all times during operation of liftgate.
7. This liftgate is intended for loading and unloading of cargo only. Do not use this liftgate for anything but its intended use.

P/N 282479-01

WARNING DECAL
P/N 282479-01



WARNING

A Liftgate extending from a moving vehicle could injure bystanders & damage property.
Stow liftgate in correct transit position before moving vehicle.

DECAL P/N 282847-01

WARNING DECAL
P/N 282847-01

TOUCHUP PAINT

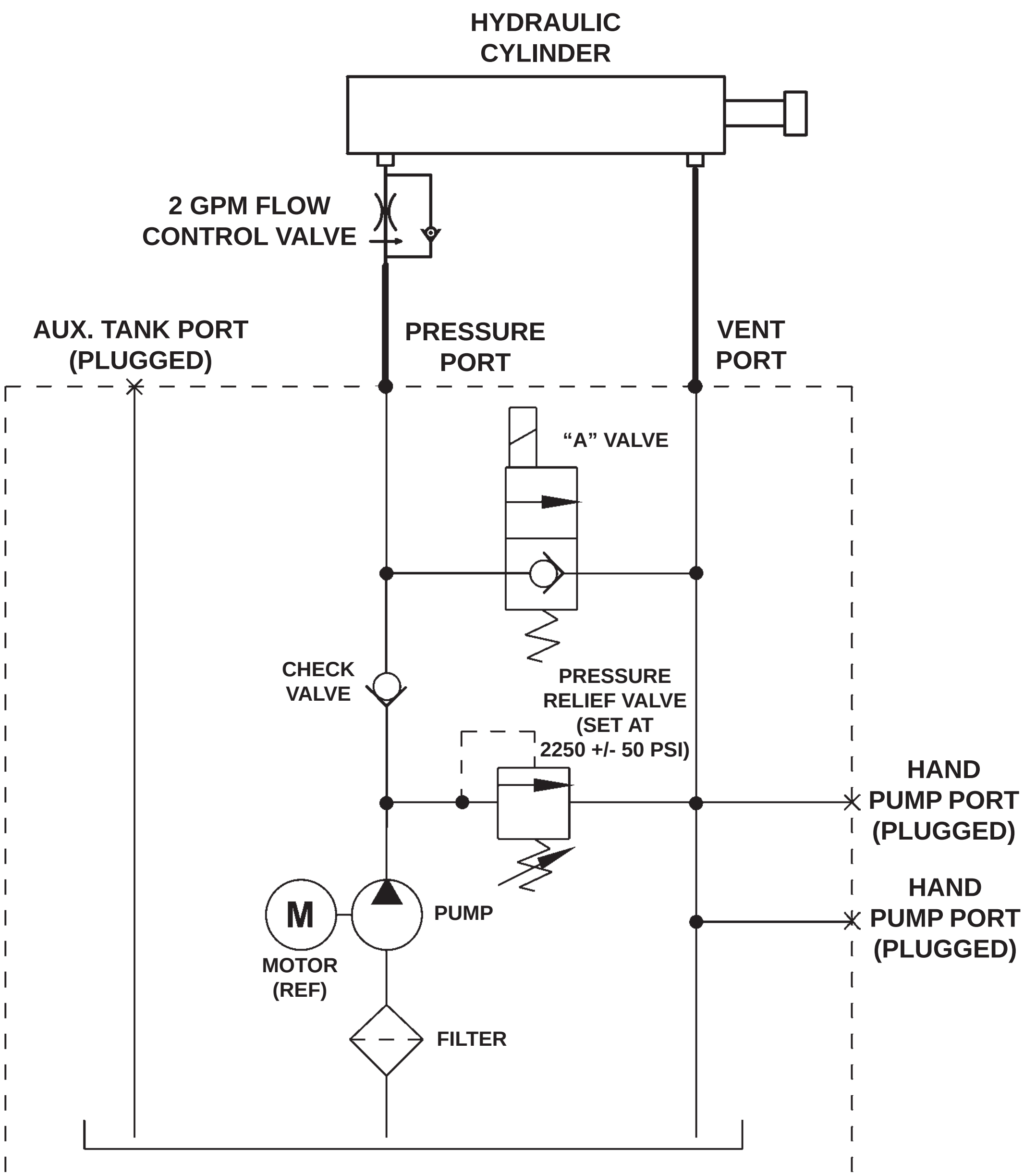
CAUTION

Damaged cylinder seals and contaminated hydraulic fluid can result from painting the polished portion of the cylinder rod. To prevent damage, protect the exposed polished portion of the cylinder rod while painting.

If bare metal or primer is exposed on the painted portions of the Liftgate, touch up the paint. To maintain the protection provided by the original paint system, **MAXON** recommends aluminum primer touchup paint kit, P/N 908134-01.

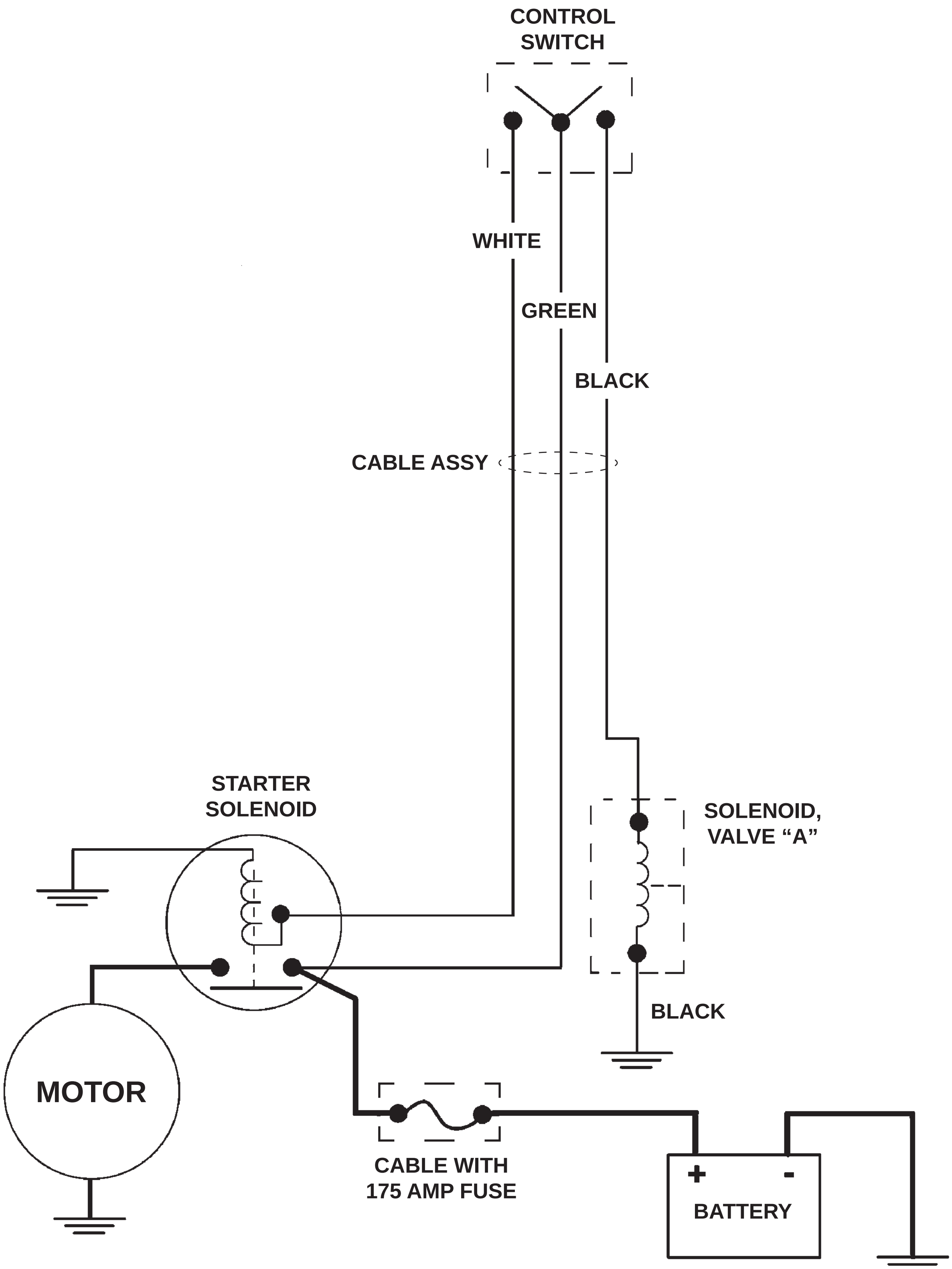
MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

HYDRAULIC SYSTEM DIAGRAM



MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

ELECTRICAL SYSTEM DIAGRAM



MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

OPTIONS

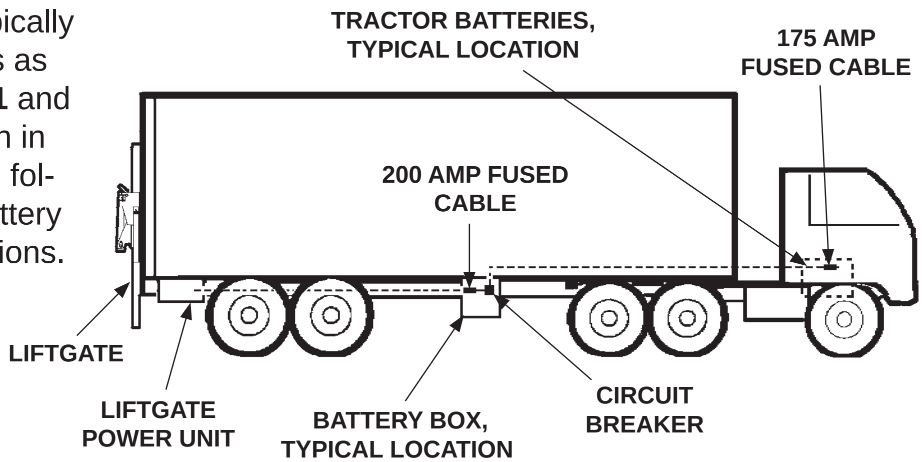
DESCRIPTION	PART NO
CAB CUT-OFF SWITCH	250477
CIRCUIT BREAKER (150 AMP)	251576
AUXILIARY HAND PUMP KIT	251849
LVS, RCM	282991-01
TRAFFIC CONE KIT	268893-01
EXTRA CONTROLS & CONTROL KITS	
HAND HELD CONTROL	053513
HAND HELD CONTROL WITH COILED CORD	053513-200
TOUCH-UP PAINT KIT	
TOUCH-UP PAINT (BCG) WITH ALUMINUM PRIMER, SMALL	908134-01

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

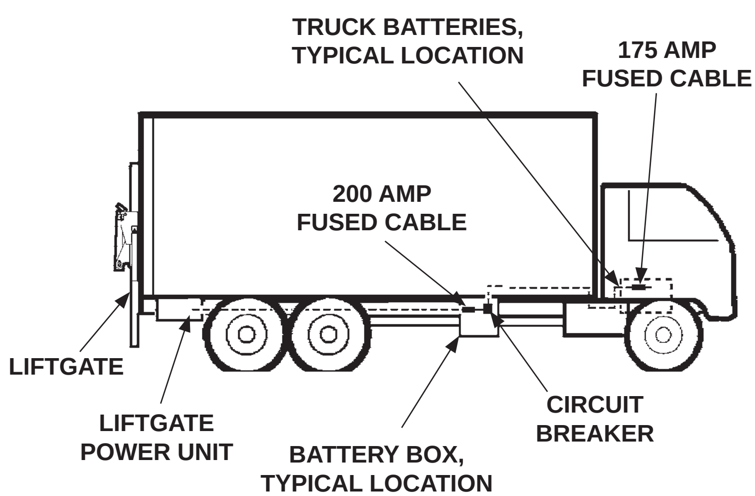
RECOMMENDED LIFTGATE POWER CONFIGURATION

NOTE: Make sure the Liftgate power unit, and all batteries on the vehicle for the power unit, are connected correctly to a common chassis ground.

1. Liftgate and additional battery box are typically installed on trailers as shown in **FIG. 44-1** and on trucks as shown in **FIG. 44-2**. See the following page for battery and cable connections.



RECOMMENDED BATTERY BOX INSTALLATION ON TRAILER
FIG. 44-1



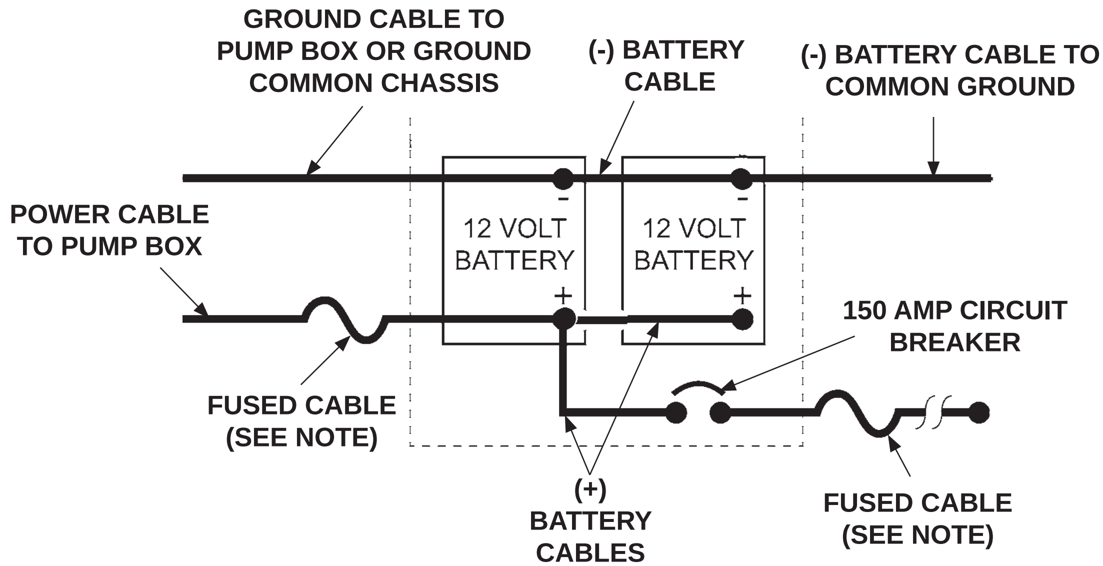
RECOMMENDED BATTERY BOX INSTALLATION ON TRUCK
FIG. 44-2

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

RECOMMENDED LIFTGATE POWER CONFIGURATION - Continued

NOTE: Always connect fused end of power cable to battery positive **(+)** terminal.

2. Recommended battery box setup for **12 volt batteries** is shown in **FIG. 45-1**.



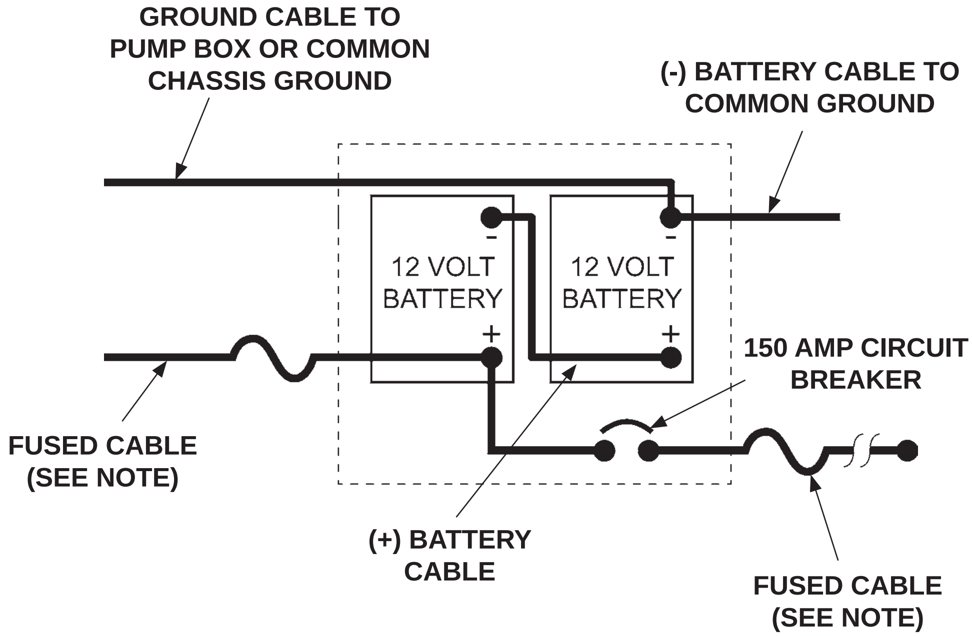
12 VOLT BATTERY CONNECTIONS
FIG. 45-1

MAXON® 11921 Slauson Ave. Santa Fe Springs, CA. 90670 (800) 227-4116 FAX (888) 771-7713

RECOMMENDED LIFTGATE POWER CONFIGURATION - Continued

NOTE: Always connect fused end of power cable to battery positive **(+)** terminal.

3. Recommended battery box setup for getting **+24 volt dc power from 12 volt batteries** is shown in **FIG. 46-1**.



12 VOLT BATTERY CONNECTIONS FOR +24 VDC POWER
FIG. 46-1